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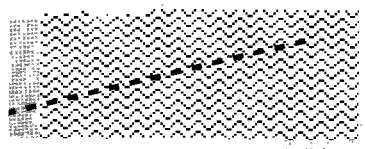
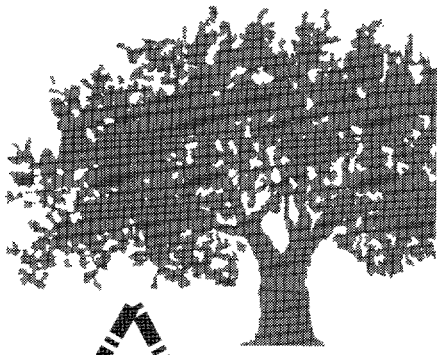
A Framework For Reforming Urban Land Policies in Developing Countries

David E. Dowall
Giles Clark





URBAN MANAGEMENT PROGRAMME DISCUSSION PAPER

URBAN MANAGEMENT AND LAND

A FRAMEWORK FOR REFORMING URBAN LAND POLICIES IN DEVELOPING COUNTRIES

Policy Paper

David E. Dowall
Giles Clarke

This document has been prepared under the auspices of the United Nations Development Programme/United Nations Center for Human Settlements (Habitat)/World Bank-sponsored Urban Management Programme. The findings, interpretations, and conclusions expressed here are those of the authors and do not necessarily represent the views of the United Nations Development Programme, UNCHS, World Bank, or any of their affiliated organizations.

Deputy Director
Division for Global
and Interregional Programmes
United Nations Development
Programme

Chief
Technical Co-operation
Division
United Nations Center
for Human Settlements
(Habitat)

Chief
Urban Development Division
Transport, Water, and Urban
Development Department
Environmentally Sustainable
Development
The World Bank

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The Urban Management Programme (UMP) represents a major approach by the United Nations family of organizations, together with external support agencies (ESAs), to strengthen the contribution that cities and towns in developing countries make towards economic growth, social development, and the alleviation of poverty. The program seeks to develop and promote appropriate policies and tools for municipal finance and administration, land management, infrastructure management, and evnironmental management. Through a capacity building component, the UMP plans to establish an effective partnership with national, regional, and global networks and ESAs in applied research, dissemination of information, and experiences of best practices and promising options.

FOREWORD

This paper has been prepared for the Land Component of the joint UNDP/World Bank/UNCHS Urban Management Program (UMP). The UMP represents a major approach by the UN family of organizations, together with external support agencies (ESAs), to strengthen the contribution that cities and towns in developing countries make toward economic growth, social development, and the alleviation of poverty. The program seeks to develop and promote appropriate policies and tools for municipal finance and administration, land management, infrastructure management, environmental management, and poverty alleviation. Through a capacity building component, the UMP plans to establish an effective partnership with national, regional, and global networks and ESAs in applied research, dissemination of information, and experiences of best practices and promising options.

This report is the third in a series of management tools to be produced by the UMP land management component. The series will cover a wide range of topics, including land information management, land registration, land development policies, standards for land regulation, and urban spatial planning. The information in these reports will be used to prepare detailed operational guidelines to help policymakers and technical staff in developing country carry out appropriate land development policies and techniques, especially at the city and municipal levels of government.

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Director
Infrastructure and
Urban Development
Department
Policy and Research Staff
The World Bank

Deputy Director
Division for Global
and Interregional
Programmes
United Nations
Development Programme

Chief
Technical Co-operation
Division
UNCHS
(Habitat)

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EXECUTIVE SUMMARY

A. Need for Urban Land Policy Reform

1. Governments around the world pursue urban land policy objectives, and they rely on a vast range of policy tools and institutions to achieve them. Many cities use master plans, zoning, subdivision regulations, building codes, and other public policies to shape development. These regulations are normally adopted to help protect the urban and natural environment, gear infrastructure investments with development, and maintain and enhance property values. Other objectives are more difficult to achieve: providing the poor with access to land, controlling land speculation, and land inflation. In the minds of many policymakers achieving these goals requires stronger medicine: nationalization of land, public land development, and highly centralized property registration systems to control and monitor land ownership.

2. A global assessment of these urban policies reveals troubling evidence that many government urban land policies are ineffective and, perhaps more alarming, frequently result in significant adverse impacts on social welfare and economic productivity. Since many government interventions are inefficient and lead to sub-optimal distributions of land resources, some policy experts argue that the best way to "manage" land use and development patterns is to rely on market forces. On the other hand, without planning and regulations, land markets are likely to generate enormous external costs and fail to produce public spaces. In fact, without government intervention critical public facilities such as parks, open spaces, and major infrastructure and urban services, which the private sector cannot profitably produce and sell, will not be provided. Thus, the solution to ineffective and counterproductive urban land policies is not to do away with government interventions and policy initiatives, but to find the proper balance, or division of labor, between the public and private sector regarding urban land development and management.

3. These facts raise some fundamental questions: What is the necessary level of urban land-use regulation to effectively manage urban development in fast-growing third world cities? To what extent should policymakers rely on economic market mechanisms or use government policies and programs to determine or control how land is allocated and used? What is the optimal division of labor between the public and private sectors regarding the provision of urban services and low-cost housing?

4. The purpose of this paper is to challenge much of the conventional wisdom about the indisputable desirability of government intervention into urban land markets and to argue for a reduction in the scope and direction of public policies and actions. It is written for a wide audience of policymakers concerned with urban development. In preparing the paper we have concentrated on raising a variety of issues for consideration. However, we do not claim to have the precise answer about what constitutes an optimal urban land policy. Instead, we have concentrated on defining the critical land policy issues and offering what can be only considered a preliminary set of guidelines for carrying out urban land policy reforms.

B. URBAN LAND POLICY PROBLEMS

5. The crisis in land-use planning and regulations in developing country cities has been well-documented. Comprehensive approaches, based on the traditional paradigm of "survey-analysis-evaluation-plan-implement" were evolved from developed country models which were themselves based on technocratic, time-consuming, and rigid procedures. The most common forms of physical planning—master plans—have failed for a number of reasons: they are too static; place too much emphasis on detailed layouts and zoning of supposed future land use; take too long and cost too much to prepare; don't offer guidance on the phasing or techniques of implementation; and ignore the costs, financing, or prioritization of proposals and seldom consider the city's real economic potential. But most importantly, these planning approaches do not consider actual economic demands for space—they ignore the capacity of households and businesses to pay for land and properties.

6. Scores of developing countries have set up parastatal organizations to carry out land development. Most often they were established to implement three objectives: to 1) channel land and housing at affordable prices to low- and moderate-income households; 2) ensure that the land value increases associated with infrastructure provisions were not appropriated by private developers; and 3) that important but risky projects avoided by the private sector are undertaken. Implicit in these sensible goals are two important assumptions: the fruits of the land development agencies actually end up going to low- and moderate-income households and that public land development agencies are efficient. Despite the great hope placed on public land development, success has been elusive. In cases where public land development does seem to work, authorities are locally controlled and managed, targeted on a limited range of objectives, and are well capitalized.

7. Important roles for scaled-back public land development corporations are to assist developers in tackling large and complex projects and to provide infrastructure. Instead of having public agencies attempt to develop areas on their own, a partnership between private land developers, construction contractors, and governments is needed.

8. Most government interventions into urban land management are far too centralized. Many nations have national regulations regarding land-use planning. Locally prepared land-use plans are frequently required to be reviewed by national ministries of planning or local government. Since this review process takes months, the approved plans are clearly out of date. Such reviews offer little benefit to the local government, but where they become effective, they ensure that the central government can maintain control over land management.

9. The lack of good cadastral, registration, and tenure records is a serious constraint on efficient city growth in developing countries. Formal systems in such countries were often established at a time of slow urban growth, but now the increasing volume of land transactions, and changes in land use related to urbanization, are causing land registration agencies to fall further and further behind in their work. In addition, the costs of registration and related procedures, including staff time, transfer taxes, stamp duties, and in some cases unofficial payments, may breed a cynical attitude in the community about the supposed benefits of using the formal

process. Further problems arise in the many cities where up to 80 percent of residents occupy their land and dwellings without any formal security of land tenure, as in most squatter settlements in Latin America. In Africa, the situation is more complicated since many areas in cities are still controlled by tribal systems of land tenure. In these circumstances, central and city governments have little control over planning, land allocation, and administration.

10. In fast-growing cities, infrastructure deployment persistently lags behind demand. The lack of adequate services imposes tragic health effects on millions of households in terms of dysentery, hepatitis, and cholera. Even when resources are available for infrastructure investment, poor coordination may constrain land development. In some cases, the problem may be insufficient coordination between the infrastructure agencies themselves. In other cases, there may be more general weaknesses in the plan-making and enforcement mechanisms available at the city level. These may lead infrastructure agencies to dismiss the planning apparatus as too weak to act as an effective framework for their investment plans. Other reasons include conflicting objectives among line agencies and different funding sources for different infrastructure components.

C. GUIDELINES FOR REFORMING URBAN LAND POLICIES

11. This paper presents a series of guidelines for policy reform, and most of them imply major political decisions and commitments on the part of governments, especially clear support for deregulation and privatization. The scope and depth of reform can vary. For example, at a modest level, land-use regulatory reforms can be initiated and targeted on master plans, subdivision controls, or permitting systems. A more ambitious reform program would be to restructure public land development agencies, breaking large authorities into small operations, and privatizing or liquidating some land development operations.

12. Depending on the focus and extent of reforms, either major or minor modifications will be required to enable legislation and statutes. Reforms may also necessitate fundamental changes in systems of property rights as well. Obviously, before strategies for major urban land policy reform can be developed, political and technical assessments are required.

The First Step to Reform: The Land Market Assessment

13. The essential problem with most nations' urban land-use policies is too much government regulation and not enough government support of private-sector institutions. The first and obvious step is for governments to conduct an audit of their urban land policies. As described in another Urban Management Program paper, a tool known as the Land Market Assessment has been developed for this purpose.

The Second Step: Decentralize Land Management Authority

14. It will be far easier to reform urban land policies if responsibilities for them are delegated to local governments. As a second step, national level assessments of the legal and institutional arrangements for urban land policy making and implementation should be undertaken. If power can be devolved to local government, the reform initiatives outlined below can be more effectively pursued and better structured to fit local land market conditions.

The Third Step: Deregulate

15. A careful and balanced deregulation of urban land policies and regulations can work to reduce land prices and increase land market efficiency. The first and most effective method for reducing the price effects of land-use and development controls is to bring land supply into balance with land demand. Residential subdivision standards should be assessed and revised to lower land development and construction costs. Land-use and development controls should be simplified and the approval cycle shortened.

The Fourth Step: Curtail Public Land Development Agencies

16. In many countries, public land development agencies do little to improve land market operations or to provide land and housing for the poor and quite often they pose a serious financial drain to governments. It is important for governments to critically assess the performance of these organizations and take corrective actions. Such actions might include restructuring very large parastatal organizations, privatizing all or part of these corporations, or liquidating them.

The Fifth Step: Improve Efficiency of Land Market Operations

17. In market-based countries where both customary and/or informal systems of land trading occur, the government should heavily invest in or promote private initiatives to provide a common titling and registration system to support land transactions. At a minimum, cadastral, subdivision, and parcel maps should be compiled, along with a system for recording real property transactions and updating ownership records. If property tax systems are to be used, additional mapped and transaction-based records are needed on property values, tax assessments, payments, and receipts.

The Sixth Step: Provide the Financial, Institutional and Spatial Structure for Installing Infrastructure Networks

18. Urban land policy needs to be linked with a sustainable program for infrastructure investment. Such a program requires that a basic spatial structure be prepared for each city, and that it be used to estimate the capital costs associated with providing the necessary infrastructure to support development. The financial program must be sustainable, this means that, to the fullest extent possible, the users and beneficiaries of the system should pay for it.

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I. RETHINKING URBAN LAND POLICIES: THE CHALLENGE OF THE 1990s

A. Objective of Paper

1.1 Governments around the world pursue urban land policy objectives, and they rely on a vast range of policy tools and institutions to achieve them. Many cities use master plans, zoning, subdivision regulations, building codes, and other public policies to shape development. These regulations are normally adopted to help protect the urban and natural environment, gear infrastructure investments with development, and maintain and enhance property values. Other objectives are more difficult to achieve: providing the poor with access to land, controlling land speculation, and land inflation. In the minds of many policymakers, achieving these goals requires stronger medicine: nationalization of land, public land development, and highly centralized property registration systems to control and monitor land ownership.

1.2 A global assessment[1] of these urban policies reveals troubling evidence that many government urban land policies are ineffective and, perhaps more alarming, frequently result in significant adverse impacts on social welfare and economic productivity. In the course of adopting these and other well- intentioned regulations, little if any thought is given to their potential cost-effects. For example, few attempts are made to answer these questions: How will master plan and zoning designations, if enforced, affect the supply of land for residential development? Similarly, how will minimum lot size standards affect lot costs? How do cumbersome and redundant formal and customary land registration systems distort land market operations and encourage informal and unregulated development? Failure to address these questions is unfortunate, since there is ample evidence that overly stringent land-use and development controls and poor titling and registration systems reduce land market efficiency and push land prices above what would prevail under competitive conditions.

1.3 Because many government interventions are inefficient and lead to suboptimal distributions of land resources, some policy experts argue that the best way to "manage" land-use and development patterns is to rely on market forces. On the other hand, without planning and regulations, land markets are likely to generate enormous external costs and fail to produce public spaces. In fact, without government intervention critical public facilities such as parks, open spaces, major infrastructure and urban services, which the private sector cannot profitably produce and sell, will not be provided. Thus, the solution to ineffective and counterproductive urban land policies is not to do away with government interventions and policy initiatives, but to find the proper balance, or division of labor, between the public and private sector regarding urban land development and management. Striking this balance will not be easy. As Dunkerley suggested almost a decade ago:

1.4 This is a field in which simple solutions are suspect. Land problems are inherently complex both in theory and in practice, particularly because of the interdependencies of land use, the specificity of location advantages, transfer costs, social taboos and inhibitions, and many other

---

1. The range of policies is staggering: land nationalization in Tanzania; massive slum eradication in Kenya; slum regularizations in Pakistan and the Philippines; breaking up large landholdings in India; speculation taxes in Taiwan; preservation of agricultural areas in the United States; and greenbelt designations in Seoul. In the interest of brevity, much but not all of the research on these policies is reviewed in this paper. Readers are urged to consult other Urban Management Program papers on land issues.

market imperfections, not the least the opportunities land transactions provide for corruption (Dunkerley, 1983).

1.5 Unfortunately, there are few success stories to draw on for policy guidance. After a decade of research, the effectiveness of urban land policies is starting to become clear: In most cases these policies, while well-intentioned and responsive to citizen concerns, are simply not effective and are sometimes detrimental--inflicting significant costs on urban residents and businesses. In city after city, inappropriate land-use controls, housing policies, or infrastructure limitations profoundly affect urban productivity and welfare. For example, sector work in Malaysia has estimated that the annual cost of inappropriate land-use and housing development regulations amounts to 3 percent of GDP (The World Bank, 1989a). In Seoul, stringent land-use regulations are blamed for rapid and continuing land price inflation (Kim, 1991).

1.6 These facts raise a fundamental question: What is the necessary level of urban land-use regulation to effectively manage urban development in fast-growing third world cities? To what extent should policymakers rely on economic market mechanisms or use government policies and programs to determine or control how land is allocated and used? What is the optimal division of labor between the public and private sectors regarding the provision of urban services and low-cost housing?

1.7 The purpose of this paper is to challenge much of the conventional wisdom about the indisputable desirability of government intervention into urban land markets and to argue for a reduction in the scope and direction of public policies and actions. It is written for a wide audience of policymakers concerned with urban development. In preparing the paper we have concentrated on raising a variety of issues for consideration. However, we do not claim to have the precise answer about what constitutes an optimal urban land policy. Instead, we have concentrated on defining the critical land policy issues and offering what can be only considered as a preliminary set of guidelines for carrying out urban land policy reforms. More work needs to be done. Over the next several years, the Urban Management Program will gather and catalog additional experience in improving urban land policies by closely working with planners and policymakers in countries interested in making reforms.

B. Organization of Paper

1.8 The paper is divided into five sections. The second section explains why urban land policy reform is needed. The third assesses current land market problems, arguing that there is too much government intervention in the wrong places and not enough in the right places. It outlines the problems of irrelevant land-use planning, overregulation and high standards, red tape, and inefficient public land development. It also describes where government is needed: land titling and registration, financing infrastructure, and promoting inner-city redevelopment. The fourth section of the paper offers suggestions about how to go about reforming urban land policy. It focuses on assessing urban land market problems; decentralizing land management authority to local governments; deregulation; privatization; improving land market efficiency; and financing infrastructure to support urban growth. This section also discusses some of the special problems associated with land reform in socialist countries. The final section of the paper offers conclusions about reforming urban land policies.

II. WHY URBAN LAND POLICIES NEED REFORM

2.1 With all of the pressing problems of poverty, homelessness, debt burdens, and trade deficits, many policymakers dismiss land market problems as issues of secondary importance to be tackled later. Such a view is shortsighted. Over the next decade most cities in the developing world will confront **major** land market problems—shortages, runaway inflation, and environmental and economic crises resulting from inappropriate land development. These problems will stem from rapid urbanization and sagging urban economic productivity.

A. Coping with Massive Urbanization

2.2 The inescapable fact underlying any discussion on urban land development and management in the 1990s is the sheer scale and pace of the developing world's urban development. The rate of urban growth is the single most important phenomenon transforming human settlements in developing countries. As Table 2-1 illustrates, the world's urban population is expected to increase by nearly 230 percent between 1975 and 2025, from some 1.6 billion to 5.1 billion. By the end of the century, two-thirds of the developing world will reside in urban areas. More than half of the urban population growth is now the result of natural increase and not of rural-urban migration, and this growth component will strengthen over time. By the year 2025, eight out of ten urban dwellers in the world will be living in developing countries (United Nations, 1985).

Table 2-1: Worldwide Urban Population Growth Trends 1975-2025

Region	Urban Population (in thousands)			Urban Population Increase	
	1975	2000	2025	1975-2000	2000-2025
Less Developed Countries	808,603	1,959,485	3,915,034	1,150,882	1,955,549
More Developed Countries	752,629	992,148	1,192,400	239,519	200,252
Total Worldwide	1,561,232	2,951,633	5,107,434	1,390,401	2,155,801

Source: United Nations, 1985.

2.3 Urbanization does not take place in thin air; it requires enormous amounts of land. As a result, cities will mushroom—doubling their built-up urban areas over the next 15-20 years. Large developing world cities like Mexico City, Jakarta, São Paulo, Bangkok, and Bombay are converting between 3,000 and 5,000 hectares of rural land to urban uses each year. India, in terms of sheer scale of urbanization, is in a class apart from most other countries:

2.4 In India, the urban population was forecast to grow from 150 million to 220 million during the 1981-1991 period—by the year 2001, the number of urban residents will have increased by 160 million, more than double the 1981 total. As urban growth continues some 600,000 hectares of rural land must be transformed to urban use during the last two decades of the century, or enough space to accommodate twenty new cities the size of Bombay (World Bank, 1984).

2.5 Such rates of increase in demand for residential, industrial, commercial, and community land have few precedents in the history of developed countries. Recent experience in many cities reveals that land to support urban growth is becoming increasingly scarce. Part of the problem is due to the sheer scale of land development pressure. As Table 2-2 illustrates, the rate of conversion of rural land to urban land for Asian cities is enormous. In Bangkok, for

Table 2-2. Annual Urban Land Conversion: Selected Cities

City	Hectares	Date
Ahmadabad	565	1980
Bangalore	1,311	1983-2001
Jakarta	2,300	1974-1984
Karachi	2,400	1979
Bogota	2,325	1971-1985
Mexico City	4,826	1970

Sources: Dowall, 1991a.

example, between 1984 and 1988, urban growth required 3,200 hectares of agricultural land per year (PADCO and LIF, 1990). In Karachi, over a similar period, 2,400 hectares of land were needed per year for urban use. Even in small and medium-sized Asian cities such as Bangalore, land conversion pressures are tremendous—about 1,300 hectares of agricultural land is urbanized each year (Srinivas, 1989).

2.6 One of the principal objectives of urban land policies is to provide land to the urban poor. This is most often attempted by the government developing land and housing projects for sale to targeted low-income households (City of Juarez, Mexico 1989). But often governments

impose sweeping policies to break up large concentrations of land ownership. India's Urban Land Ceiling Act is the most well-known example. In Mexico, the federal government has purchased and regularized thousands of hectares of irregular land for the poor (Wilk, 1991).

2.7 How a city uses its land resources is extremely important. In many countries, arable land is limited and urban development of prime farmland threatens self-sufficiency in food production. In other cases, countries have limited supplies of land for economic development. The urban and economic development of Singapore and Hong Kong are textbook examples of the importance of carefully planning future urban land development to maximize economic productivity. Both Hong Kong and Singapore embarked on ambitious programs of housing development to improve living conditions and labor productivity and to free-up land for industrial estates (Castells, Goh, Kwok and Lee, 1988).

2.8 Beyond the "atypical" cases of Hong Kong and Singapore, other nations are starting to effectively manage their land markets to achieve social, economic, and environmental objectives. Botswana, Barbados, Honduras, and Nepal provide exemplary models of well-conceived and targeted government interventions to increase urban land supply to support population and economic development. Their approaches rely on limited government intervention and active participation of private land developers. In the case of San Pedro Sula, Honduras, the city developed new land-use planning and development control policies that are based on careful assessments of urban land demand and supply patterns (PADCO, 1989). In Botswana, the government has altered its control over land supply and delivery to increase the responsiveness of the market to urban growth (see Box 1).

2.9 Obviously, what works in one country may not work in another and, as always, local context is a critical point of departure for redesigning the focus and structure of national and local land-use policies. Of fundamental importance is the structure of governmental administrative power, that is, the degree to which land-use policy is set and managed by central government. Since many developing countries built their governments on principals of centralized forms of administration, the institutions of land management and policy reflect a high degree of centralized control over urban land development, land titling, and registration and land-use controls.

2.10 On the other hand, the land-use policy reforms being explored in this and other papers prepared by the Urban Management Program call for a highly decentralized and accommodating style and structure of land management—using tools, policy instruments, and institutions that are "market friendly" and can easily be adapted to changing conditions. As McAuslan and Farvacque state:

> The orderly development of land markets, the integration of formal and informal land markets and settlements, the creation of flexible consumer-oriented systems of land management, the commitment to transparency, probity, equity and value for money in administrative processes connected with land--cannot be divorced from and indeed may be seen as a paradigm of the wider issues of governance now on the agenda of many states and the international aid community; participation and decentralization in government, transparency, and accountability in administration, an enabling rather than a controlling function for the public sector generally. Adoption of this philosophy and approach to governance as a whole will make much easier the

Box 1 Botswana's Reform of Urban Land Policies

During the 1980s, the supply of serviced land available for housing fell far behind demand, as urban population growth surged to 12 to 13 percent per year. Between 1987 and 1992, 24,000 residential plots are projected to meet demand. In 1987, in an effort to resolve acute land shortages, the government initiated a series of reforms to speed land delivery and increase private sector access to land. Specific actions included:

1. Launching of an infill housing program carried out by the Botswana Housing Corporation (BHC).

2. Creating joint programs between the BHC and the Botswana Development Corporation to provide 362 hectares of land in Gaborone.

3. Intensified efforts by the government to recruit land development professional and technical experts.

4. Increasing the role of the private sector in land development.

5. Increasing the density of residential development projects in urban areas.

6. Streamlining regulations for land development, conveyancing, and improving interagency coordination.

Initial reports indicate that these and other policy initiatives in Botswana have significantly increased the efficiency of the urban land market, making it far more responsive to demand pressures. A key ingredient of this successful program is the emphasis placed on coordination between government agencies and the private sector's expanded role in land development (World Bank, Botswana Housing Sector Study, 1988).

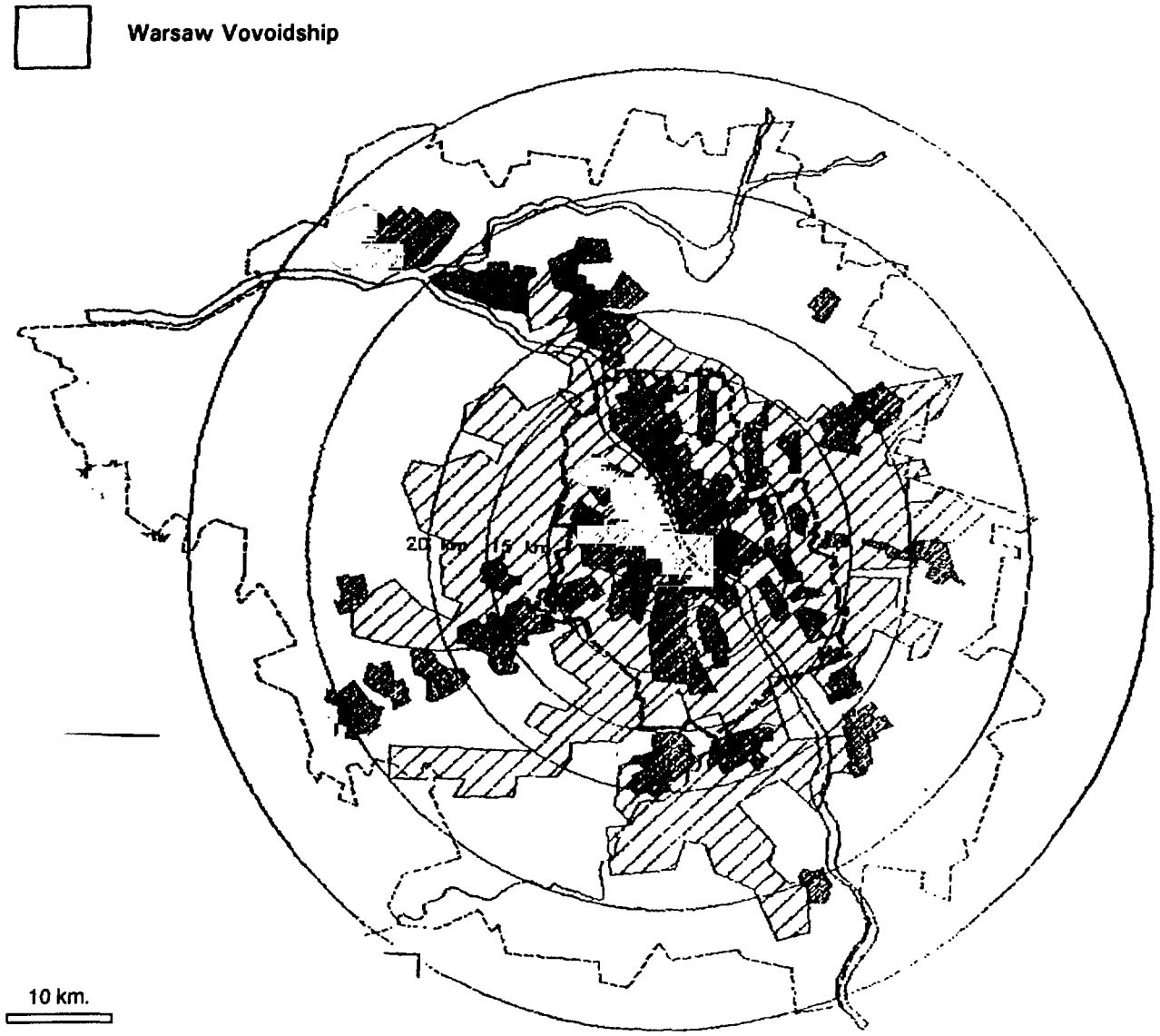
development of a system of urban land management that aims to facilitate the operation of efficient and equitable land markets and to contain the externalities of such markets with a flexible, modest and implementable set of regulatory instruments (McAuslan and Farvacque, 1991).

2.11 Policymakers need to reconsider specific urban land policy reforms within the larger context of existing political and administrative institutions. Clearly, some of the specific policy reforms proposed in the paper presume broader changes in property rights and patterns of governance.

The importance of flexibility and accomodation

2.12 While there are striking differences between countries like Hong Kong and Botswana, their urban land-use policies are similar in that they are demand-oriented and accommodating. Their land development plans are based on short-term projections of land demands, attempting to accommodate future development, not to impede it. This orientation stands in sharp contrast to other rigidly planned and regulated cities. A few examples will illustrate this point. First consider Warsaw. As Figure 2-1 shows, the built up areas of Warsaw and Paris cover about the same area, extending outward to 40 kilometers from the city center, despite the fact that Paris

Figure 2-1. Comparison Between Warsaw and Paris Built-up Area



City	*People* (millions)	*Built- up Area*	*Gross Density in Built-up Area*
Warsaw	2.5	401	81
Paris	10.3	1,201	80

Source: Bertaud, 1991.

has four times the population of Warsaw (10.3 versus 2.5 million persons, Bertaud, 1991). Thisis the result of very high land-use planning standards rigidly applied, which keep densities low.[2] In such cases, the way in which land development takes place will affect the costs of infrastructure systems such as transportation, water, and sanitation. More compact patterns of development can help economize on these capital expenditures. Another side-effect of inefficient patterns of land development is the loss of farmland. This is a critical problem in the People's Republic of China (see Box 2).

2.13 How cities achieve efficient land-use patterns is the result of a combination of market mechanisms, public investments, and planning. In market-based economies with limited land-use and development controls, urban growth increases the price of land. As prices increase, dwellers and businesses build at higher densities to economize on their use of land. This shift to higher densities leads to a more economical use of land (Mills, 1974). Governments play an important role in promoting such efficient patterns of land development by planning for and permitting higher density development and providing it with the infrastructure it needs. Setting the structure for future urban development by building key infrastructure is the most effective method for promoting sound urban development.

Box 2: Land-use Planning in Zhejiang Province

In Zhejiang Province vast areas of agricultural land on the fringes of cities are being converted to urban uses. In Hangzhou, for example, total residential floorspace more than doubled between 1980 and 1986. The massive expansion of urban areas is the direct result of population increases triggered by migration, China's vigorous housing construction programs which have increased the amount of floorspace in the province by 50 percent since 1980, and the development of new economic activities which require land for industrial estates (World Bank, 1987).

The rate and extent of land conversion in Zhejiang is largely conditioned by urban planning policies implemented by cities. Despite the fact that agricultural land is very scarce, urban planning standards call for a reduction in the density of development in Zhejiang urban areas to a very low 150 persons per hectare density. This outcome reflects the fact that planning is completely divorced from resource constraints or the discipline of market pressures. If present land-use policies and norms continue, urbanized land in Zhejiang Province will increase by 140 percent, from 21,600 hectares in 1985 to 51,800 hectares in the year 2000. On the other hand, if future urban development occurred at the typical higher densities found in other large cities (gross densities of 210 persons per hectare), the land requirements to meet future development would be slashed to 50 percent of the master plan amount—36,700 hectares. The rigid application of current master plan policies results in a dramatic reduction in population density in the four principal cities of the province and considerably more conversion of rural land to urban uses (The World Bank, 1987).

2.14 Another action to promote efficient and economically productive urban development is for government to redevelop older urban areas that are no longer economically productive. In

2. Other factors account for Warsaw's pattern of low-density development as well: low infrastructure capacities including sewage treatment capacity and a reliance on septic tanks, highly subsidized transportation, high air pollution, and low agricultural land values.

old cities, central areas are usually ready for redevelopment, since the housing stock is frequently dilapidated and infrastructure systems are worn out. Also the pressures of international competition compel cities to modernize factories and commercial centers, requiring massive redevelopment. Such programs have been fully carried out in Taipei, Hong Kong, Seoul, Singapore, New York, Paris, and London (OECD, 1990). In some instances the projects were initiated by the central government (Paris' La Defense), in other cases they were locally initiated (London's Docklands). Certainly not all attempts have been successful. London's

2.15 Dockland's required massive subsidies, is poorly served by transit and is now entering the property market just when London's office market is flooded with vacant space.

2.16 Not all government attempts at ensuring an adequate supply of land for urbanization have worked well. For example, Karachi's inadequate housing production is due to the lack of serviced land and limited finance capital. The most visible manifestation of land constraints are the numerous informal housing settlements, katchi abadis, surrounding Karachi. Because these settlements have proliferated at about twice the rate as the formal sector, over the past ten years the portion of the population living in informal areas has increased from 25 to nearly 50 percent. Simply put, because the formal sector has failed to meet the housing needs of Karachi's growing population, it is becoming increasingly irrelevant.

2.17 In developing cities around the world, the demand for land for urban use is large and growing. According to the United Nations, between 1975 and 2000, the annual average population increase of urban areas in developing regions is estimated at 56 million—equivalent to adding about four Mexico Cities to the world each year. At a gross population density of 210 persons per hectare, this translates into about 267,000 hectares per year. In the next century, the rate of urban population growth is projected to increase to 86 million persons per year, over five Mexico Cities per year—requiring that 410,000 hectares of land be converted to urban use annually. Accommodating this growth is critical; cities need a planning and development framework that ensures orderly spatial development. The imperative is clear, we simply must reform our land-use policies. Given tremendous population pressures, a new policy environment is needed for ensuring the efficient and sustainable use of land for urban activities.

B. Economic Importance of Cities

2.18 Cities make important contributions to economic growth, accounting for approximately 60 percent of the gross national product of developing countries (Ljung and Farvacque, 1988). They are the principal engines of national economic growth, serving as incubators for new and emerging enterprises and places where goods, information, labor, and other services are efficiently exchanged. In short, cities are theaters of economic productivity and land serves as the stage. If the stage is cramped, too expensive, or lacking adequate infrastructure, economic activity will be stifled.

2.19 Empirical evidence supports the inexorable link between economic development and urbanization. Table 2-3 illustrates the important role that cities play in generating national economic output, showing that in many countries, cities generate a disproportionate share of economic output. The respective capital cities of the Ivory Coast and Thailand generate over 50 percent of the economic output, but account for less than 15 percent of the national population.

The reasons for such economic dominance stem from agglomeration economies. These economic advantages make cities extremely productive since they lower the costs of production and service provision. Locational factors are important features defining agglomeration economies, since the proximity between producers and suppliers can reduce the overall costs of production (Peterson, Kingsley and Telgarsky, 1990b).

Land as the platform for economic activity

2.20 On the other hand, poor spatial patterns can cause diseconomies of agglomeration. Under such circumstances, traffic congestion, pollution, and land degradation impose external costs on enterprises and cancel-out the beneficial effects of agglomeration economies. As Richardson points out, large, megacities cannot operate efficiently if they have only one main business center; they must transform themselves from "monocentric" to "multicentric" metropolitan areas. This transformation is difficult, and most planning controls have not been successful in redirecting growth. In both Cairo and Jakarta, planning regulations are having little impact on redirecting urban growth (Richardson, 1988). On the other hand, in cities with permissive planning controls, new centers can quickly develop, as in the case of Bogota (Dowall and Treffeisen, 1991). As Box 3 illustrates, when there are few controls, new informal industrial areas can flourish.

2.21 In extreme cases, externalities operate to constrain economic growth. As urban diseconomies force up the costs of doing business, firms shift to other locations. In many developed economies, business activities have decentralized to suburban locations to avoid high costs. In cases where these decentralization pressures are building land-use planning controls often work to constrain spatial restructuring and raise land prices.

C. Improving Urban Economic Productivity

2.22 The macroeconomic crisis of the past decade has generated increasing concern about correcting unsustainable economic distortions in order to improve the long-run prospects for economic growth. The *Report on Structural Adjustment Lending II* has identified the need for policy reform and public investment to raise the level of public and private investment aimed at increasing economic productivity (The World Bank, 1989b). Inevitably, much attention will turn to vitalizing urban economies, which account for a large share of the GDP in most countries. Improving the productivity of urban economies will not be easy; large third world cities are being overwhelmed by massive population growth pressures which outstrip the capacity of water, sanitation, and environmental systems (Cohen, 1991).

2.23 Maintaining and increasing urban economic productivity in the 1990s will require a set of urban land policies which ensure that adequate supplies of serviced land are available for productive enterprises, as well as residential and social uses. The critical policy objective should be to concentrate on the provision of infrastructure to support and facilitate economic activities. This means providing modern infrastructure systems to provide electric, water, and roadway systems to enable manufacturing facilities to maintain low operating costs.

Table 2-3. Economic Importance of Urban Areas			
All Urban Areas	**Years**	**Percent of National Population**	**Shares of National Output**
Haiti	1976	24	58% National Income
India	1970	20	39% NDP
Kenya	1976	12	30% National Income
Mexico	1970	60	80% Personal Income
Turkey	1981	47	70% GNP
Individual Areas			
Abidjan, Ivory Coast	1985	15	70% Economic & Commercial Transactions
Sao Paulo, Brazil	1970	9	36% NDP
Guayaquil, Ecuador	n/a	13	30% GDP
Karachi, Pakistan	1974	6	16% GDP
Lima, Peru	1980	28	43% GDP
Manila, Philippines	1970	12	25% GDP
Bangkok, Thailand	1972	11	37% GDP
Bangkok, Thailand	1985	13	86% GDP in financial sector, 74% GDP in manufacturing
Lagos, Nigeria	1980	5	40% skilled labor force
Source: Peterson, Kingsley, and Telgarsky, 1990b.			

2.24 Poor infrastructure conditions have dramatic effects on economic productivity. Recent research on urban infrastructure in Nigeria has illustrated that unreliable infrastructure services impose heavy costs on manufacturing enterprises. In Lagos, virtually every firm has its own electrical generator to cope with persistent blackouts and brownouts. These firms typically invest between 10 to 35 percent of their capital and operating expenses to compensate for other unreliable services—water, telecommunications, public transportation for workers. The impact of such compensating investments falls heavily on small firms, making it more difficult for entrepreneurs to start-up new firms (Lee and Anas, 1989).

2.25 In centrally planned economies, the provision of housing by the state or by enterprises adversely affects urban productivity as well. In Poland, for example, housing shortages make

Box 3: Informal Development in East Delhi

After independence, the Viswas Nager area of East Delhi was transformed from an agricultural village to one of the largest centers for the production of copper wire and PVC-coated wire in Asia. Three factors triggered this growth:

1. A bridge was constructed across the Juma River, linking Viswas Nager to markets in Dehli.

2. The partition of Pakistan and India caused an influx of Punjabi small businessmen to the area.

3. The creation of a nearby government copper ingot industry.

Viswas Nager's growth was largely unconstrained by government regulations: government planners did not crack down on building or business activities. Instead of having to follow strict land-use and zoning categories, merchants and residents laid out small plots on 20-foot modules that could easily be combined or subdivided to make efficient plots for small factories and houses. Unconstrained by zoning, businesses could be set up in houses and gradually expanded (from one room to several).

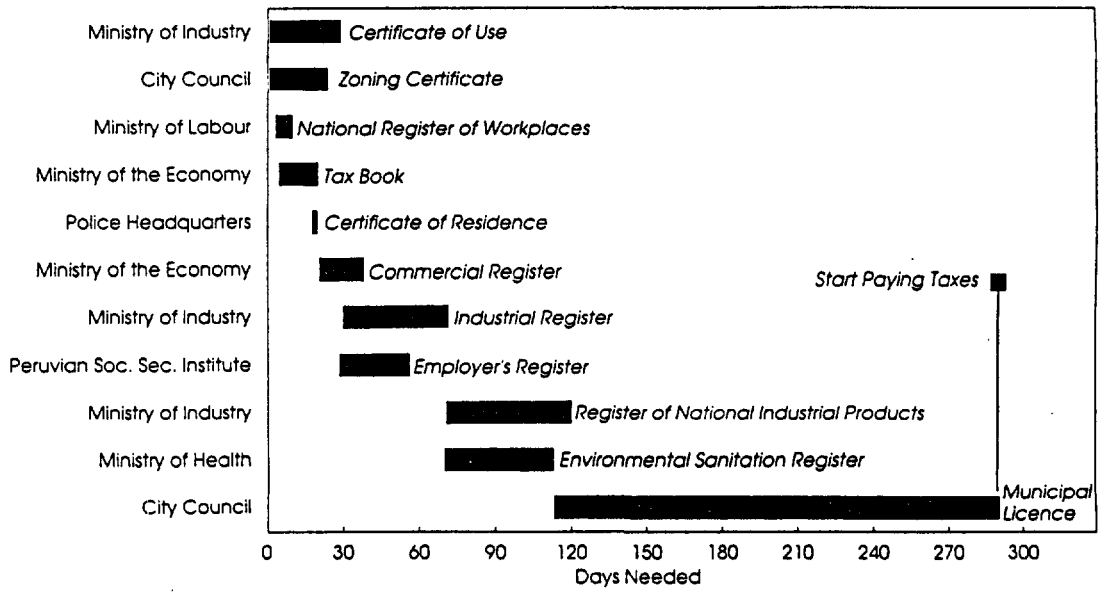
In the face of political pressure and the obvious fact that Viswas Nager developed into a vital area, the government provided paved roads and provision of 240 volt electrical service. Fueled by upgraded infrastructure and product demand, Viswas Nager expanded rapidly. Lots were combined to make room for larger factories, and the absence of planning and subdivision controls made it easy for the entrepreneurs to incrementally expand (Benjamin, 1991 in Peterson, Kingsley and Telgarsky, 1991).

households reluctant to move to other cities where employment opportunities may be better; consequently labor mobility in Poland is quite low, and businesses must pay more to attract workers than would otherwise be the case if a well-functioning housing market existed (Mayo, Stein, 1988). These additional labor costs hurt the productivity and competitiveness of businesses. In some instances, enterprises actually provide worker housing. Under such systems, managers have far less flexibility to adjust labor inputs to match outputs.

Land use regulations retard economic dynamism

2.26 Another worldwide problem affecting the productivity of firms is the extent and complexity of government regulations. Municipal regulations over plant siting and construction, business operations and licensing create enormous barriers for firms. As deSoto has vividly illustrated in his book *The Other Path*, municipal regulations in Lima, Peru, require that businesses obtain 11 different permits to establish a manufacturing plant. In total these permits cost the equivalent of 32 monthly minimum wages and the entire process can take as long as ten months to complete (see Figure 2-2). Just to set up a small shop requires the equivalent of 15 monthly salaries. Such red tape makes it difficult for small firms to start up operations and ultimately limits economic growth. As deSoto points out, since the typical street vendor (operating without a permit) makes about 14 minimum monthly wages, it is no surprise why so few of them "go-legal" and establish a formally sanctioned enterprise (deSoto, 1989).

Figure 2-2. Red Tape Involved in Small Business Registration in Peru
(partial listing of requirements)



Source: de Soto, 1989.

2.27 On a larger scale, some national or municipal governments have directly intervened in the land market to decentralize large-scale industries. Most of these efforts have not been effective. Between 1960 and 1980, the government of Brazil spent $14,000,000 to develop the Northeast of the country by relocating firms from Sao Paulo. At an average expenditure of $15,000 per job, such a policy is unsustainable and distorting (Hamer, 1985). In Bangkok, where the government established new sites for industrial parks for firms, few industries relocated, and households resisted moving as well. In Korea, India, and Venezuela, for example, laws have been adopted that prohibit new industries from locating within cities. Policies that prevent the birth of new firms kill the incubator effect of a city's agglomeration economy and directly limit economic growth (Lee, 1985).

Flexibility and industrial restructuring

2.28 A final productivity issue likely to command the attention of policymakers in the 1990s is the need to redevelop and modernize old urban areas of cities. The advent of advanced communication, manufacturing, and goods handling technologies is having enormous impacts on the economic landscapes of cities. With the globalization of finance, business services, and production, cities around the world are scrambling to make their cores more productive centers for finance and business services. Up-to-date communications infrastructure, more efficient office complexes, and bigger airports are some of the key ingredients needed. In Western Europe, governments have launched large-scale urban redevelopment projects to provide land for industrial restructuring (OECD, 1990).

2.29 These same trends are going to hit the large cities in developing countries as well. In developed countries it is common that between 50 and 70 percent of total urban employment

is in service-sector activities. On the other hand, in many developing countries, only 20 to 30 percent are in such employment categories. As these urban economies transform themselves to meet the demands of the future, a major overhaul of land use and infrastructure will be needed. This pattern is clearly underway in the East Asian region as the rapidly industrializing nations shift away from basic producer goods to more complex goods and services. For example, in Hong Kong the share of total employment in manufacturing has fallen from 44.6 to 35.8 percent between 1976 and 1986. At the same time employment in finance, insurance, and personal and business services has increased from 18.5 to 24.5 percent. In Singapore, the service sector has increased from 28.2 to 36.9 percent of Gross Domestic Product between 1970 and 1986.

2.30 The transition will be difficult for some cities. In Shanghai, for example, literally 50 percent of the manufacturing sector's plants and equipment was placed in service before 1949. Despite the decrepit state of its manufacturing infrastructure, industrial activity accounts for about 70 percent of Shanghai's economic output. As it moves toward the year 2000 massive redevelopment will be necessary. Much of the housing stock in these centrally planned cities is deteriorated and needs to be replaced. The industrial base of many Eastern European cities is no longer viable now that the cobweb of price distortions is being swept away. Obviously the land development challenges posed by the restructuring of these economies are monumental.

2.31 On the other hand, some governments have successfully launched programs to redevelop and restructure economic activities. Kingston, Jamaica's inner-city area, had been steadily declining for over forty years, with businesses and middle-income families moving to the suburbs. While the area was little more than a burned-out shell of dilapidated buildings, market studies indicated that there was a demand for low-cost, labor-intensive factories in the inner urban area. A nonprofit redevelopment organization was established to rebuild the area. In the first three and one-half years, the agency leased 18,500 square meters of factory space at market rates. Overall some 1,300 jobs have been created (Urban Institute, 1991).

Making land-use planning "market friendly"

2.32 Initiatives to improve the economic productivity of cities in developing countries pose a great challenge to policymakers. Urban land policy will play a critical role in facilitating such programs—targeting where trunk infrastructure should go, assembling land for new business and residential districts, designing redevelopment projects, and improving housing and working conditions. To be successful, cities need an urban land policy framework that incorporates sustainable mechanisms for recovering the costs, public-sector infrastructure investments, a public-sector enabling strategy to support the private-sector land development, and, last but not least, an urban planning framework for coordinating spatial development so that the land requirements of a growing economy can be met with the least amount of adverse environmental impacts. The key feature of this new approach is the great stress placed on market-responsive planning systems, where urban land-use planning aims to support and encourage new development not stifle it.

2.33 The next section of this paper discusses key land policy problems. It will serve as a basis for setting an agenda and program for urban land policy reform.

III. LAND MARKET PROBLEMS: TOO MUCH GOVERNMENT IN THE WRONG PLACES, NOT ENOUGH GOVERNMENT IN THE RIGHT PLACES

A. What Urban Land Policies Should Do

3.1 At the risk of oversimplifying the complexities of formulating sound urban land policies, the essential problem is to determine the appropriate division of labor between the public and private sector. How much government intervention is needed and where? What can and should the private sector do to facilitate urban land development? Are there ways in which the public and private sectors can work together? What is the best way to implement and sequence urban land policy reforms?

3.2 There are three generally accepted justifications for government interventions into urban land markets:

a. Elimination of market imperfections and failures to increase operating efficiencies.

b. Removing externalities so that the social costs of land market outcomes correspond more closely to private costs.

c. Redistribute society's scarce resources so that disadvantaged groups can share in society's output (Moore, 1978).

3.3 These principles apply to urban land policy in a number of ways. The first two seek to increase the allocative efficiency of land-market outcomes. The third principle endeavors to improve the equity of land-market outcomes by targeting land resources to low- and moderate-income groups.

3.4 Efficiency-enhancing government interventions include increasing the level and transparency of information about land markets and removing market imperfections, failures, and externalities. A common governmental action is to increase the clarity of the land market by installing better titling and registration and more comprehensive land information systems (Holstein, 1991)[3]. For example, in cases were there is a poorly functioning land-registration system, buyers of land are often not sure if they are actually buying from the "real" owner. In Jakarta, between 1988 and 1990, there were over 50 major disputes over land ownership. In most cases, two or more individuals claimed to own the same site (Leaf, 1991). The lack of clear proof of ownership imposed substantial costs on the land market: first, without an accurate ownership register, prospective buyers must conduct extensive research on property ownership before deciding to enter into the transaction; second, owners of untitled property are unable to use the land as collateral for obtaining loans from financial institutions and thus must either forgo credit or pursue more expensive channels of borrowing. In some cases land disputes are so widespread that they effectively "shut down" a land market. In Accra, Ghana, there are 16,000 land disputes

3. However, as will be discussed below, the private sector can also be mobilized to improve titling and registration systems.

waiting for adjudication (Acquaye, 1989). As a direct consequence, vast tracts of land in the northern suburbs are frozen.

3.5 Another argument for government intervention into the land supply system is the frequent failure of private developers to provide essential services because they cannot profitably produce and sell them. Examples of such goods include parks and open space, roads and sidewalks, and community facilities such as drainage and water systems. Goods that are not provided by the private sector are frequently referred to as "public goods," and many governments have taken a variety of initiatives to fill this gap. In many countries parastatal organizations such as land development authorities have been created to provide low-cost land developments and housing. In other cases, governments have adopted regulations compelling the private sector to provide necessary public goods when they build projects.

3.6 In the case of removing externalities, governments have adopted a variety of planning controls, building standards, and land development laws that attempt to eliminate external costs associated with land development. Development controls limit building heights and bulk in order to ensure that surrounding properties are not adversely affected by new development. Zoning and planning regulations seek to limit the types of activities permitted on land, so that noisy and dusty factories do not adversely affect residential neighborhoods. Such laws are also used to control development intensity so that existing infrastructure is not overtaxed.

3.7 The third urban land policy objective seeks to improve economic equity by allocating resources to low-income groups. In the absence of government intervention in urban land markets, low-income households may have difficulty getting access to land for housing. It is quite common for government to directly allocate land for housing to these low-income groups (Hyderabad Development Authority, 1987).

3.8 Together, these three justifications for government intervention into the land market can be used as criteria for designing an urban land policy. Under such criteria, a city's or a nation's urban land policy would normally call for a variety of specific laws, regulations, and actions. Quite often, the central government decides to take the lead to solve land management problems, in spite of the fact that most land policy issues are of local concern. Frequently, government intervention is misdirected: There is too much regulation and not enough facilitating and enabling actions to support private land development. In the rush to "patch externalities," governments implement a "blizzard" of regulations that smothers formal private-sector initiatives and overconstrain urban land markets. At the same time, government routinely ignores taking action to create land titling, registration, and information systems that are so critical for efficient land market operation. They also neglect infrastructure needs and programs to modernize and redevelop old urban areas. The remainder of this section describes the most common misdirected actions.

B. Too Much Government

Irrelevant and costly physical plans and regulations

3.9 The physical planning crisis in developing country cities has been well-documented (see for example: Kim, 1991, World Bank, 1984, 1987, and 1989). Comprehensive approaches,

based on the traditional paradigm of "survey-analysis-evaluation-plan-implement," were evolved from developed country models that were themselves based on technocratic, time-consuming, rigid procedures[4]. The most common forms of physical planning—master plans—frequently fail for a number of reasons: they are too static; place too much emphasis on detailed layouts and zoning of supposed future land use; take too long and cost too much to prepare; do not offer guidance on the phasing or techniques of implementation; ignore the costs, financing, or prioritization of proposals; and seldom consider the city's real economic potential. But most importantly, these planning approaches do not consider actual economic demands for space. They ignore how households and businesses alter their consumption of land as prices change.

3.10 A recent assessment of Serpong, in Indonesia, makes an interesting case study of the limitations of master planning (Bertaud, 1989). This city's master plan allocates only 34 percent of the total planned area for residential development, and of this amount only about 15 percent has infrastructure. Thus the actual developable land in Serpong is limited to less than 30 square kilometers. Most of the land is set aside for agricultural and open space uses, roads, and nonresidential activities.

3.11 Another problem generated by zoning and master planning is the inherent lack of reality represented in the plans. While the plans are prescriptions of what should or ought to be, government officials frequently treat the plan as given, and program infrastructure into areas where there is limited demand. Figure 3-1 illustrates the lack of correspondance between the Serpong master plan and the actual pattern of residential development. Some of the areas designated as residential development have no settlements and many areas with kampungs are not zoned as residential. Master plans should concentrate on shaping and accommodating, not suppressing, future urban development. The plans should work to minimize adverse environmental impacts and encourage efficient land and infrastructure utilization.

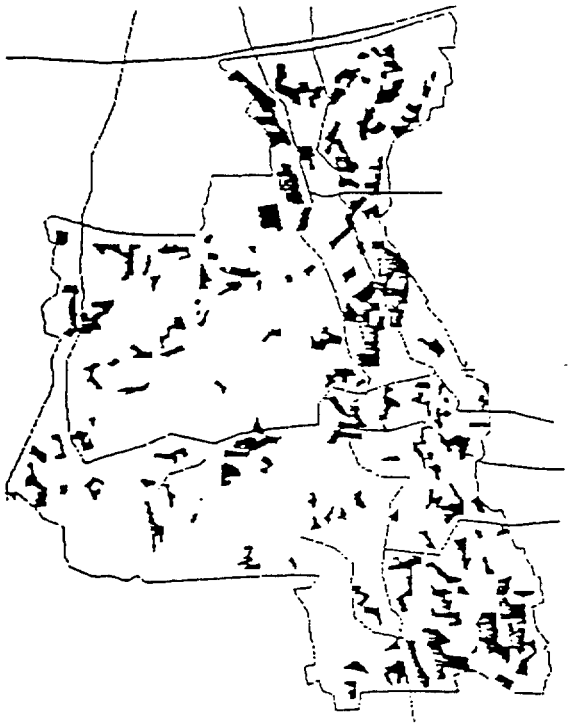
Most master plans spawn rigid regulations

3.12 Master plans are translated into zoning ordinances and other controls. Where controls have been enforced vigorously, land availability for low-income housing shrinks and housing costs increase. The cost burdens placed on low-income households is rarely considered by the master planners. Unfortunately, those who are acutely aware of the impacts—community leaders and officials of implementing agencies—are seldom involved in the master planning process. Thus, opportunities to prepare plans in accordance with city needs and household affordability are missed.

4. In developed countries there has been considerable debate over the value and effectiveness of comprehensive plans. See, for example, Herbert J. Gans, *People and Plans: Essays on Urban Problems and Solutions.*

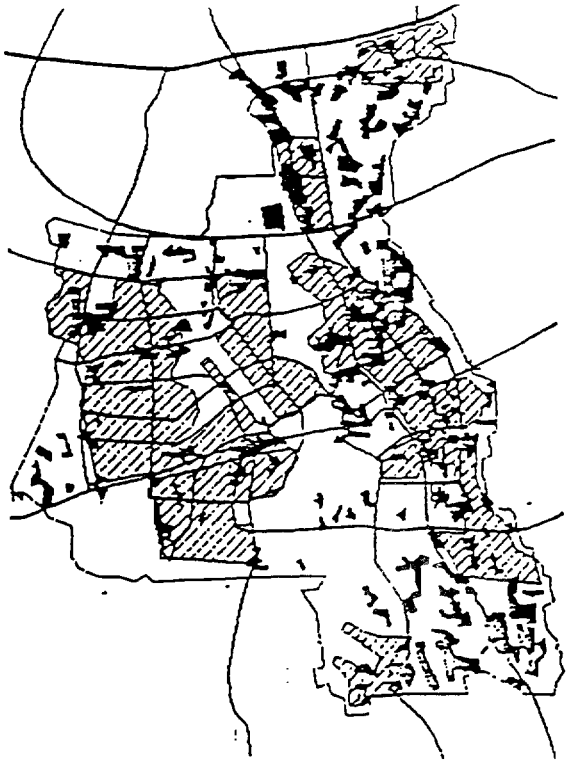
Figure 3-1. Serpong Master Plan

Master Plan Projections and Existing Settlements



EXISTING SETTLEMENTS AND INFRASTRUCTURE

Existing Kampung



MASTER PLAN PROJECTIONS

Existing Kampung

Area Zoned Residential Year 2005

Planned Trunk Infrastructure

3.13 Restrictions on the supply of land and the density of residential development greatly affect land costs. As Ohls, Weisberg, and White have illustrated, if zoning regulations restrict the supply of land available for development below that which would be normally exchanged in the market, they operate to increase land prices (1974). The supply of residentially zoned land is often limited when communities attempt to maintain environmental quality or fiscal position by designating land for open space or agricultural use, or for more fiscally desirable commercial or industrial activities. These patterns can be found in developing countries as well, as depicted by the following examples.

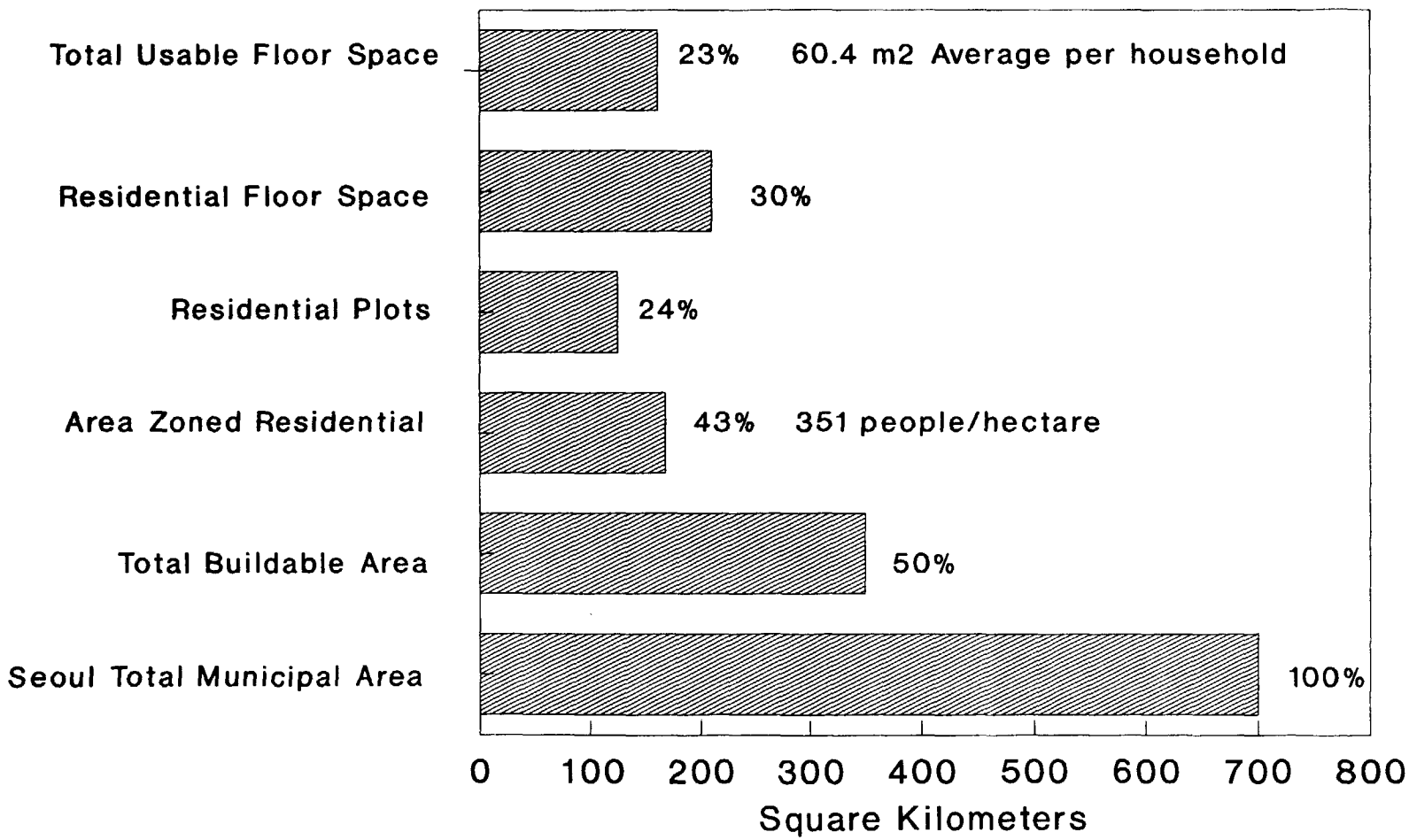
3.14 Renaud has illustrated the significant impacts of land-use controls on land and housing prices in Seoul (1989). Three government policies have constrained the supply of developable land in Seoul: strong zoning policies which restrict the conversion of agricultural land; a greenbelt policy to block the further outward expansion of the city; and land readjustment methods linked with monopolistic administrative practices to force up land prices (Bertaud, 1991).

3.15 Figure 3-2 provides a first cut at estimating the cumulative effects of these controls on the potential supply of residential floorspace that can be ultimately constructed. Of the entire metropolitan area comprising slightly more than 70,000 hectares, only 50 percent is permitted to be developed. That is, due to greenbelts, recreational, and agricultural zones, fully 50 percent of the Seoul metropolitan area cannot be developed. Of this area, about 30,000 hectares is contained in zoning designations permitting residential development.

3.16 Zoning controls specify the location of residential uses. Site planning regulations and subdivision controls determine the actual way in which land is to be used for residential projects. These controls pertain to building setbacks, plot and street widths and lengths, and dedication requirements for public facilities. Applying these standards to the 30,000 hectares of residentially zoned land yields approximately 17,500 hectares of land for potential residential use. Put another way, subdivision standards reduce residential development area by 12,500 hectares.

3.17 Another significant land development regulation is the floor area ratio or FAR. The FAR restricts the density of residential development permitted on a plot. A ratio of 1.0 to 1.0 means that a building of no more than 1,000 square meters can be built on a plot of 1,000. If the FAR ratio is 1.6 to 1.0, then a building of 1,600 square meters can be built on a plot of 1,000 square meters. In the case of Seoul, the overall FAR for all residential districts in the metropolitan area is about 1.25 to 1.0, and the 16,800 hectares can support approximately 21,000 hectares of built space.

Figure 3-2. Seoul: Land and Building Regulatory Constraints on the Production of Residential Floor Space



3.18 The final restriction limiting residential development potential pertains to building codes. In multifamily buildings, a portion of floorspace is dedicated to common areas such as hallways, fire escapes, and lobbies. As specified by SMG codes these requirements will reduce the actual floor area for residential units from 21,000 hectares to 16,100 hectares of possible residential space. These regulatory measures have substantially reduced the supply of land for housing and have been a contributing factor to the rapid escalation of land prices in Seoul[5].

3.19 The precipitous increase in land and housing prices is challenging the stability of the Roh government. Land prices in metropolitan Seoul increased at an annual rate of 24.2 percent between 1974 and 1989 (Kim, 1991). According to a recent study by the Korean Research Institute for Human Settlements, the annual increase in land values in 1988 (Won 88 trillion) exceeded the annual wage income for all of the country's workers (Clifford, 1989).

The price effects of strict land-use controls

3.20 Planning-induced limitations on land for residential, commercial, or industrial development can force up land prices, but their ultimate impact depends on the degree to which development controls limit higher-density building. Price increases will be substantial if it is difficult to substitute other inputs for land (Ingram, 1982). As land prices increase, housing densities normally increase as households attempt to economize on their use of more expensive land. If, however, zoning or building laws limit density, then the land supply constraints will exert more pressure on land prices. What has happened in Seoul has not occurred in Bogota or Bangkok.

3.21 Bogota, Colombia, like Seoul, has a greenbelt ordinance, but land prices have not been increasing as fast as Seoul's—its real land prices have been increasing by four to six percent per year over the 1980s. This is due in part to the fact that Bogota's building regulations are liberal and residential building densities have been increasing, particularly in middle- and upper-income areas. The substitution of capital (taller and more dense buildings) for more expensive land is clearly apparent in Bogota. Empirical analysis of housing development in Bogota between 1984 and 1989 results in an estimate of land-capital substitution elasticity of 0.69, indicating that for each 10 percent increase in land prices, the ratio of capital to land increases by 6.9 percent (Dowall and Treffeisen, 1991).

3.22 A similar, but more dramatic, pattern of rising densities is found in Bangkok (Dowall, 1991d). Faced with rising land prices, low-cost housing producers have shifted from producing small townhouses to five- and six-story condos. As Table 3-1 illustrates, between 1988 and 1990, fully-serviced residential plot prices increased by 21 percent per year. To respond to these high prices, developers have modified their production strategies. As Table 3-2 shows, housing projects are now much farther from the city center, smaller (6.8 versus 15.3 hectares) and considerably more dense (56 versus 35 dwelling units per hectare). As long as housing developers

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5. Clearly, other factors have influenced land prices as well. Korea's rapid growth of income and wealth has fueled the demand for land and housing, and there is some evidence that corporations and investors have been holding prime urban land off the market.

Table 3-1. Price Trends for Serviced and Unserviced Residential Plots 1988, 1989, 1990 by Distance from City Center in Constant 1990 US$/Sq. meter

Distance from city	Serviced Plots			Annual Compound Increase	Unserviced Plots			Annual Compound Increase
Center, Km.	1988	1989	1990	1988-90 (percent)	1988	1989	1990	1989-90
0-5	63.93	67.31	74.81	8.2	*	*	*	*
6-10	32.21	37.20	43.90	16.7	15.71	17.04	20.39	13.9
11-20	14.63	17.47	21.68	21.7	5.42	6.63	9.42	31.9
21-30	9.55	13.08	15.36	26.8	3.12	4.24	5.92	37.7
Over 30	4.08	5.46	7.58	36.3	1.55	2.10	3.34	46.7
Overall	23.35	27.57	34.13	20.9	4.90	5.82	9.19	37.0

* less than 10 cases

Source: Dowall, 1991d.

are able to make these types of adjustments, the effects of rising land prices will not fall too heavily on households.

Escaping from strict land-use controls: the informal sector

3.23 If master plans and land-use regulations are closely followed and enforced, developers will not be able to offset rising land prices by increasing density, and housing prices will quickly rise. Without other options, households are not formed or they will crowd together. What actually happens in developing countries is that households shift to the more affordable informal sector, where by ignoring government rules, densities can be increased and housing costs lowered. For example, in Karachi in 1988, the average price of a house in a planned housing estate was $5,045, equivalent to 8.1 times the average annual income of low-income households (Dowall, 1991c). Clearly, without any mortgage finance system, it is practically impossible for low-income households to acquire or rent housing in the formal sector. Instead, they resort to the informal and unsanctioned areas for housing where they can obtain shelter and land at far lower costs. In Karachi's katchi abadis, houses average $1,266—one-fourth of the price in planned areas. Here, the unsanctioned informal sector provides the flexibility for households to get access to affordable housing.

3.24 While commercial activities can also locate in higher density office blocks and business centers, industrial and warehousing activities have less flexibility. In both Bogota and Bangkok there are signs that industrial activity is shifting to suburban locations or moving beyond the region to lower-cost rural areas.

Table 3-2. Summary Characteristics of Private Developer-built Housing Projects 1986 and 1990		
Characteristics	**1990 Projects**	**1990 Projects**
Avg. Distance to City Center	20.3	16.7
Avg. Land Area, (meters)	6.8	15.3
Avg. Dwelling Units	380.4	530.2
Avg. Denisty (Units/hectare)	56.0	35.0
Percent with Public Transport	89.8%	81.1%
Avg. Distance to Main Road (meters)	558.0	—
Percent with MWWA Water	88.1%	67.9%
Percent Using Tubewells	11.9%	38.0%
Percent with Electricity	98.3%	98.1%
Percent with Telephones	74.6%	39.6%
Total Housing Covered by the Surveys	28,183	24,918
Source: Dowall, 1991d.		

3.25 In India, urban land-use controls and policies have a dramatic impact on land supply and price, and the explosive growth of the informal sector. India has had land-use planning controls since the 1950s. In the 1960s, policies were expanded and urban renewal schemes and public development authorities were established. In 1976, the Urban Land Ceiling Act was adopted in an effort to check speculation. As a World Bank report indicated:

past urban land management strategies have not been overwhelmingly successful in meeting the more important objectives outlined by the 1965 Committee on Urban Land Policy: providing adequate quantities of urban land at reasonable prices and safeguarding the rights of the underprivileged (World Bank, 1984).

3.26 Land price inflation has been enormous. In Bombay, real land prices increased by 720 percent between 1966 and 1981 (World Bank, 1984). The Urban Land Ceiling Act has caused substantial problems—significant reductions in the supply of land for residential development, creation of a vast black market for real estate, and an overall worsening of housing affordability in India's major urban areas (Acharya, 1989). One of the most alarming results of these policies is the rapid growth of the slum population. As of 1983, India's slum population stood at between 32 and 40 million people, and was growing faster than the overall urban population.

3.27 The net effect of such inadequacies is that the majority of urban growth in developing countries is now taking place outside the "official" control systems. Thus, informal residential and business development increasingly dominate new urban areas, relying on self-help techniques ranging from the illegal squatting and tapping of urban services by low-income households to the provision of their own electricity, water, and sewerage supply by high-income developers. Increasingly, therefore, "traditional" planning activities are restricted to trying to control unplanned growth and where possible to bring some development coordination and services to these

settlements. In such areas, the new paradigm of urban expansion is "occupation-building-servicing-planning." This is a situation in which the much debated question of "public participation in the planning process" does not arise. It is the public that does the planning and the development; the planner is left out.

Inappropriate regulations and standards

3.28 Gold-plated and expensive subdivision standards are common throughout the developing world, making land and housing very expensive. Regulations covering land development standards restrict the intensity of development by requiring large plot sizes or excessive amounts of land for circulation and open space within subdivisions. Large minimum lot-size requirements increase the floor price of residential lots. While large-lot zoning reduces the per hectare price of raw land, the reduction in prices is usually offset by higher land requirements.

3.29 In Karachi, where the formal minimum size of a KDA-produced plot is 120 square yards and housing prices average 8.1 times the annual earnings of low-income households, excessive land subdivision regulations stipulate large residential plots. All of the plots allocated by the KDA are over 120 square yards. In Malaysia, land-use regulations and standards add considerably to housing costs. The area per house provided for roads is up to four times greater in the typical Malaysian subdivision than in comparable North American or Western European projects. According to accepted international practices, about 25 percent of the land set aside in the typical subdivision is wasted. The streets are too wide, the set-backs too great, and land is set aside for redundant community facilities (The World Bank, 1989a).

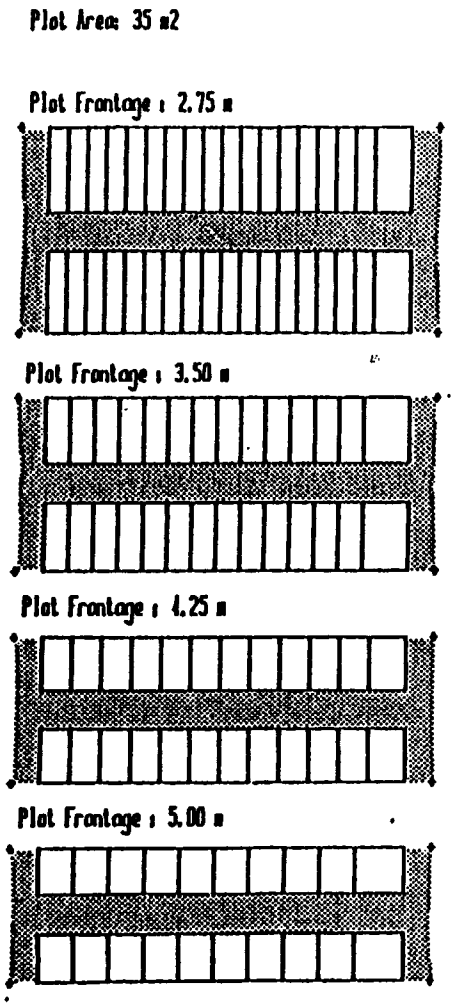
3.30 A recent World Bank report prepared by Alain and Marie-Agnes Bertaud and Jim Wright examines the implications of subdivision standards on land use and infrastructure utilization (1988). Four factors influence subdivision efficiency and plot costs:

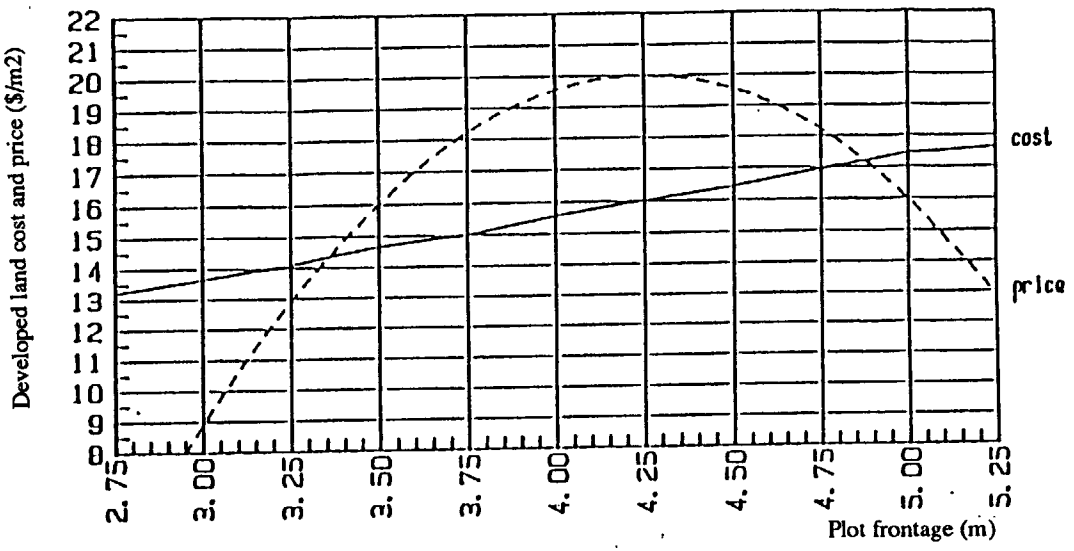
a. plot frontage;
b. block length;
c. street width; and
d. infrastructure standards.

3.31 For plot frontage, two competing factors work to determine cost and price. With more narrow lots, more lots can be subdivided within each block. This reduces the per plot costs of streets and infrastructure. On the other hand, narrow plots mean that the houses would have narrow rooms and be less attractive to potential buyers. Thus, prices for very narrow plots are quite low. Figure 5 illustrates how prices and costs vary according to plot frontage. Based on a hypothetical but realistic case project, and assuming an average plot size of 35 square meters, the most profitable frontage width is between 4.0 and 4.25 meters. At this price the developer will maximize his or her per-plot profit.

3.32 Variations in block length also impact subdivision costs. This is because there are economies in road space and infrastructure deployment as the overall length of blocks is increased. This result is shown graphically in Figure 6. Road width will impact the plot costs as well. Figure 7 illustrates how increasing road widths influence the costs of plots. The increase

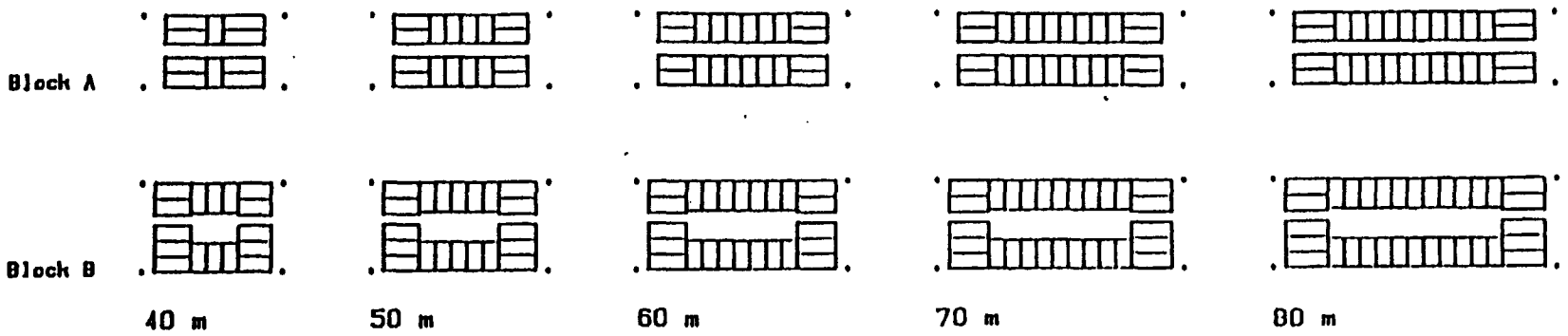
Figure 3-3. Variations in Infrastructure Cost and Plot Value When Plot Frontage Increases

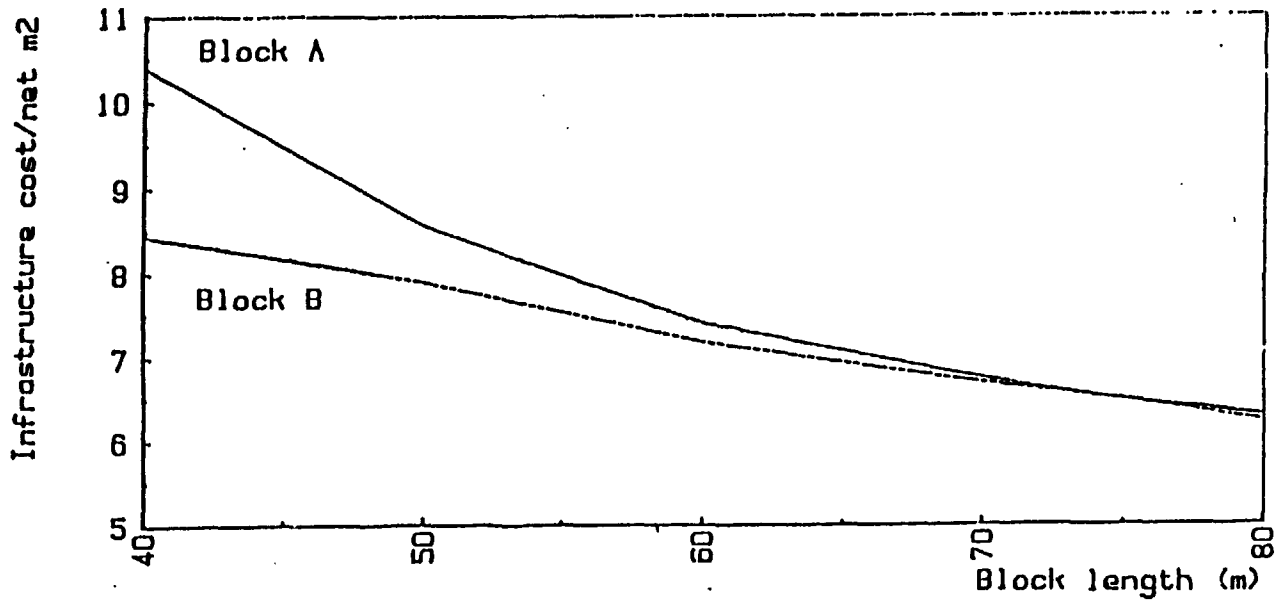




Sources: Bertaud, Bertaud and Wright, 1988.

Figure 3-4. Infrastructure Cost and Block Length Variations

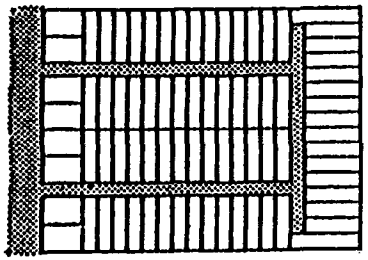




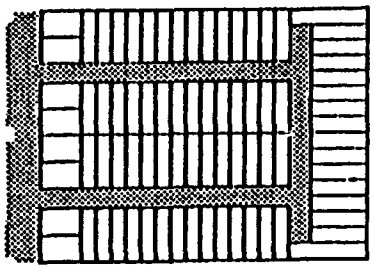
Sources: Bertaud, Bertaud and Wright, 1988.

Figure 3-5. Variation in Infrastructure Cost When Street Width Increases

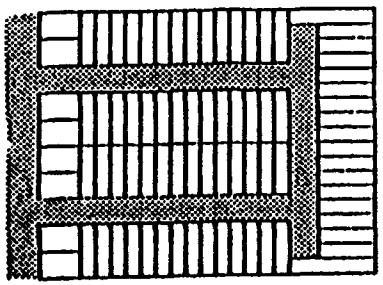
Street width: 4m

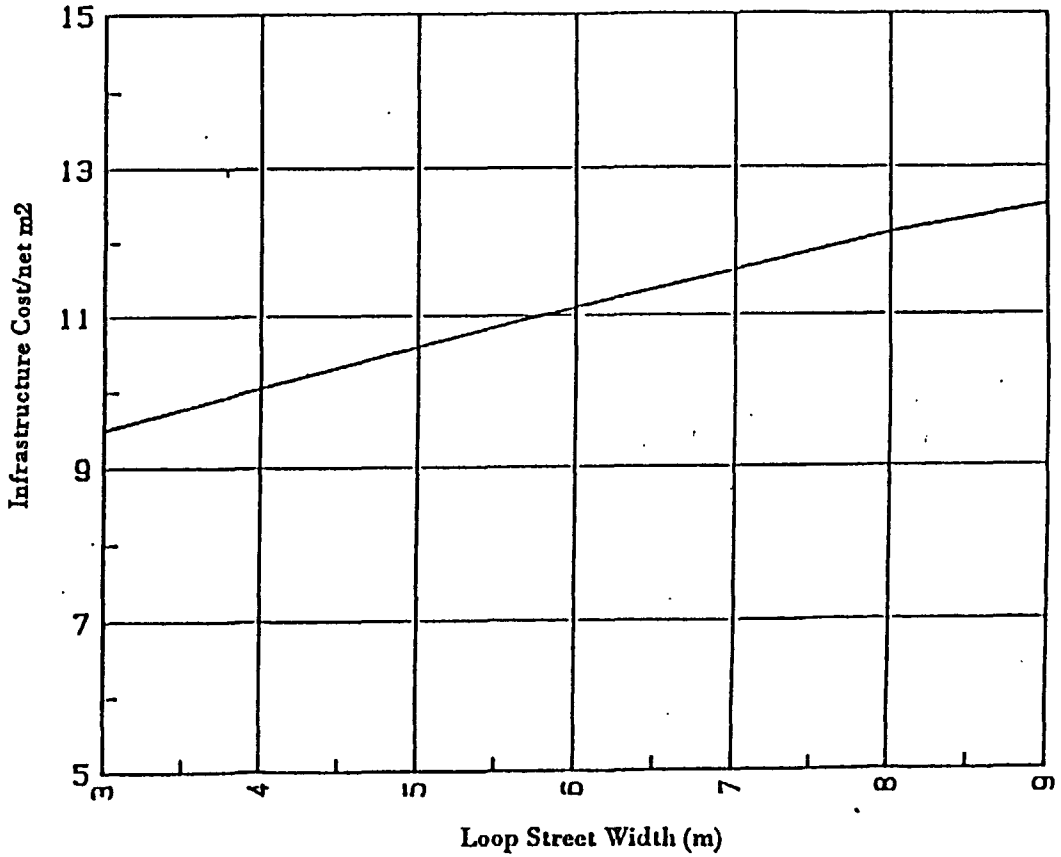


Street width: 6m



Street width: 8m





Sources: Bertaud, Bertaud and Wright, 1988.

is due to two factors: wider roads are more expensive to construct per block; and wider roads take up more space and make less of a subdivision marketable. In Jakarta, studies of relaxed subdivision regulations that allow for 100 meter block lengths, narrower access and collector streets indicate that on-site per square meter land development costs can be reduced by 27 percent (Linares, 1989).

3.33 Changing standards for infrastructure, such as the types of permitted road surface materials, or the diameter of water pipes, can also influence the costs of plot developments. In the case of Malaysia, excessive subdivision standards pertaining to plot sizes, setbacks, street widths, community facilities, and retention ponds limit the amount of a subdivision's land that can be marketed to between 28 and 47 percent (The World Bank, 1989a). This range is far lower than found in other countries (60 to 70 percent), making housing costs extremely sensitive to land costs.

3.34 Besides raising the costs of plot development, land subdivision regulations limit the ability of developers to respond to rising land costs by altering the design of subdivisions. As land prices increase, strict plot size or circulation requirements make it difficult to build at higher densities.

3.35 An example of this is vividly illustrated in Bangkok, where land prices have increased dramatically over the past three years. As previously illustrated in Table 3-1, the real price of serviced and unserviced residential plots increased by 21 and 37 percent per year respectively between 1988 and 1990. In response, Bangkok's developers have dramatically shifted their production of affordable housing from townhouses to condominium units. These private developers, like elsewhere, are market-driven—they build housing that is profitable to provide. When unconstrained by regulations, they will respond with a product that is attractive to the consumer.

3.36 In many developing country cities, land-use regulations, planning, and building standards constrain low-income groups' access to land. While these regulations attempt to ensure citizens' health, safety, and welfare by strictly controlling building and land development standards, they force the very groups they seek to protect into the completely unregulated informal sector. There is a need for a better balancing of affordability with environment and public health protection.

Procedural delays and red tape

3.37 Another way in which government regulations influence land and housing costs is through regulatory complexity. Complicated procedures for obtaining development permission make it difficult for developers to quickly respond to changing housing demands and create barriers for new firms wanting to build and sell housing.

3.38 A comparison of Malaysia's and Thailand's system of development approval is instructive. A recent appraisal by the World Bank concluded that newly-built housing prices in Malaysia increased by an annual rate of 18.9 percent between 1972 and 1982, a rate about triple the overall increase in consumer prices and about four times the increase in housing prices experienced in Thailand over the same period (The World Bank, 1989a). According to the Bank

report, the reason for the rise in Malaysia's housing prices is the combination of high government-imposed housing standards, overly complex and time-consuming housing project approval procedures, the sluggish response of the housing industry to increases in housing prices, and the high housing demand. For example, it takes between five and eight years to obtain all the necessary permits from 15 to 20 government agencies for subdivision approval. By sharp contrast, in Thailand it takes about five months to secure subdivision approval from five government agencies.

Public land development

3.39 Scores of developing countries have set up parastatal organizations to carry out land development. Most often they were established to carry out three objectives: to 1) channel affordably priced land and housing projects to low- and moderate-income households; 2) ensure that the land-value increases associated with infrastructure provision were not appropriated by private developers; and 3) that important but risky projects avoided by the private sector are undertaken. Implicit in these sensible goals are two important assumptions: the fruits of the land development agencies actually end up going to low- and moderate- income households and the public land development agencies are efficient. Despite the great hope placed on public land development, it has mostly been a failure. As a rule, public land development agencies have evolved into very large and inefficient organizations incapable of reaching a scale of production which would justify their size (van Meurs, 1986). Even the largest public land development agency in the world, Indonesia's Perumnas, does not operate at a scale of production to warrant its massive size. During the 1980s, Perumnas' housing production averaged 17,000 units per year, about 4.25 housing units for its 4,000 employees (Dowall, 1989). In contrast, Indonesia's private-sector land and housing developers build an average of 30 to 60 housing units per year per employee.

3.40 In countries where public ownership of land is dominant, land market constraints and severe price distortions are common. Despite its vast land holdings, the Karachi Development Authority (KDA) has failed to provide serviced plots to those who need them. Between 1974 and 1985, of the 200,800 plots planned by the KDA, only 76,135 were allotted and only 56,000 were actually provided with services (Dowall, 1991b). Underpricing of allocated plots, lack of funding, and poor management have conspired to constrain Karachi's residential land market (see Box 4).

3.41 In other countries, public land development agencies have been experiencing difficulties similar to the KDA. There are also other problems as well. In Morocco and Thailand where stocks of publicly held land in urban areas has been depleted, public projects have been stalled due to lack of land. In both Morocco and Thailand, it is difficult for public agencies to acquire and assemble land. Private landowners do not want the trouble of dealing with complicated and time-consuming public conveyancing procedures (PADCO, 1987a and 1987b). In other instances, government agencies have not used market research to identify suitable areas for housing or industrial estates. Until recently, Perumnas, Indonesia's National Urban Development Corporation, did no market research before acquiring land. Consequently, they frequently purchased remote sites which turned out to be difficult to market, or they purchased sites that were too large—taking many years to sell off. In May 1989 Perumnas had nearly 24,000 unsold housing units, most of which were located in areas with little demand for housing.

3.42 As a broad tool of urban land management, public land development rarely works. This is because land development is extremely complex and risky. Inspection of successful land developers reveals that they are small, highly entrepreneurial, pragmatic and staffed by highly-skilled personnel willing to take risks. Most public agencies don't have these characteristics (Dowall, 1989).

Box 4: Karachi Development Authority

The KDA is Karachi's major land developer, charged with the responsibility of developing and distributing residential plots to residents. Over the past ten years, the agency has had a difficult time financing the construction of serviced plots, claiming that it lacked sufficient resources to provide necessary infrastructure.

The fundamental problem is that the KDA has been setting its allotment prices at cost recovery, and transferring a considerable "development gain" to allottees (estimated in constant 1988 prices to be $14,300,000 USD in 1980 and $10,500,000 USD in 1985). Since there is no guarantee that the allottees are of low or moderate income, the transfer of this gain serves little social purpose. In fact, it creates speculative demand for plots and merely transfers the benefits of development gain from the public sector to private individuals. The KDA would have been better off to charge full development value prices for the allotments and use the additional revenues to build low-cost housing or cross-subsidize the sale of plots to accurately targeted low-income households.

Market pricing could be achieved by disposing of plots by auction. By auctioning off most of its plots, the financial condition of the KDA would be vastly improved; production of schemes and serviced plots would accelerate. At the same time, a portion of the additional resources could be used to subsidize the production of low-income housing, and the administrative burden of allotting plots would be reduced, allowing the KDA to concentrate on conveying plots to low- and moderate-income groups (Dowall, 1991b).

3.43 In the public sector, on the other hand, most land development agencies are quite large, frequently running into the thousands. Obviously, these agencies are much more bureaucratic in structure and style of operation. Professionals working with these operations will tend to be concerned about following the rules and playing it safe. They are not interested in taking risks. Ultimately, given the possibility of conflicts arising in the execution of policies and programs, staff may be drawn to inaction. This pattern of inaction, produced by conflicting goals or contradictory directives from central and provincial managers, has been well-documented (Amos, 1984).

3.44 In cases where public land development does seem to work, the agency is locally controlled and managed and targets its activities on a limited range of objectives (such as the redevelopment of a small area of Kingston, Jamaica). Successful land development agencies set limited goals and are well capitalized (Dowall, 1989). This is typically the pattern found for public development corporations in Western Europe and North America (Dowall, 1987). Land development agencies in developing countries would be far better off if they concentrated on only trying to do what the private sector cannot—assemble land for redevelopment projects (Los Angeles's California Plaza, for example), provide costly infrastructure to suburban areas (the Korea Land Development Corporation), or construct low-cost rental housing for well-targeted users (small nonprofit housing cooperatives and NGOs).

Urban land policy is too centralized

3.45 A final and cross-cutting problem of "too much government" is that most government interventions into urban land management are far too centralized. Many nations have national regulations regarding land-use planning. Locally prepared land-use plans are frequently required to be reviewed by national ministries of planning or local government. Since this review process takes months (actually years in many instances), the approved plans are clearly out of date. Such reviews offer little benefit to the local government, but where they become effective they ensure that the central government can maintain control over land management.

3.46 A clear example of the problems of centralized land management is reflected in the bottlenecks associated with land titling and registration. Ghana and Peru have operated with highly centralized procedures for land registration and titling. In most cases, the process is time-consuming and complex. In Peru, before recent reforms, titling required 207 bureaucratic steps handled by 48 different government offices, including the Office of the President. Navigating through these hurdles took about 43 months (deSoto, 1989). In Ghana, securing title to a plot can take at least one year, usually longer, and involves shuffling papers back and forth between local and national offices of the Land Commission. The byzantine administrative structure severely impedes the titling system.

3.47 The national government's role in land management needs to be reconsidered. National government is better suited to set broad standards for titling and registration, and policies on environmental impacts related to urban development. Local governments should have more control over decisions regarding land development, siting of major facilities, and land-use regulation.

3.48 More discretion should be granted to the private sector, and reforms should be encouraged that promote competition in the construction and land development industry (Peterson, 1990). Private enterprises should be regulated to minimize adverse environmental impacts associated with land development and where appropriate, they should be required to provide and/or build public goods such as parks and drainage systems. Additionally, important linkages between the private and public sector should be made to improve land and housing development for low-income groups.

C. Not Enough Government

Poor titling registration and tenure security

3.49 The lack of good cadastral, registration and tenure records is a serious constraint on efficient city growth in developing countries. Formal systems in such countries were often established at a time of slow urban growth, but now the increasing volume of land transactions, and changes in land use related to urbanization, are causing land registration agencies to fall further and further behind in their work. In addition, the costs of registration and related procedures, including staff time, transfer taxes, stamp duties and in some cases unofficial payments, may breed a cynical attitude in the community about the supposed benefits of using the formal process. Further problems arise in the many cities where up to 80 percent of residents occupy their land and dwellings without any formal security of land tenure, as in most squatter

settlements in Latin America. In Africa, the situation is more complicated as many areas in cities are still controlled by tribal systems of land tenure. In these circumstances, central and city governments have little control over planning, land allocation and administration. In Accra, conflicting customary and modern systems of titling and land registration have resulted in the filing of 16,000 legal claims over disputed properties. The morass of litigation has forced land development on the fringe of Accra to a standstill [Acquaye, 1989]. In Asia, a further problem is the long delays in registration which forces many people to deal with their land informally [McAuslan and Farvacque, 1991].

3.50 Obtaining proper title for projects in Indonesia can take considerable time, depending on the legal status of the land, its intended use and the desire of the owners to sell it. In West Java, land transfers take an average of 32.5 months for title issuance [Struyk, Hoffman and Katsura, 1990]. Beyond the time requirements, complex land titling procedures impose significant economic costs as well: titling expenses add between 10 and 29 percent to the cost of land acquisition.

3.51 One of the major impacts of poor titling and land registration systems is the inability of landowners to gain access to formal credit sources. Formal sector lenders require that borrowers collateralize loans by pledging their property as security. Without an adequate title, this is impossible. Extensive research has been conducted on the effects of poor title on farmland productivity. Research on farms in Thailand reveals that owners of titled land have much better access to credit than their counterparts without clear title [Feder, et al., 1988]. With such access to credit, these farming operations are much more productive, and consequently more valuable. In Thailand, comparable untitled lands were valued at between 43 and 80 percent of titled land [Feder, et al., 1988].

3.52 Security of tenure, such as that provided by clear title, also confers significant benefits on urban households: It removes the risk of eviction and also provides dwellers with access to credit for housing construction and upgrading. In Jakarta, residential plots with clear title sell at a 45 percent premium over comparable plots without clear title [Dowall and Leaf, 1991]. Studies of Manila reveal that the risk of eviction lowers the value of housing units by 25 percent [Friedman, Jimenez and Mayo, 1988]. Other research on these informal settlements finds that as security of tenure increases, households invest more resources in upgrading their residences.

3.53 While in most instances titling and registration is provided by government, it can also be provided by the private sector or by both the public and private sector as well. In North America, titling and registration are jointly handled by local government and the private sector (the former handling the actual registration and the latter guaranteeing the validity of the title). In Peru, a new system of property registration was initiated in 1990.

3.54 Designed and implemented by the Institute for Liberty and Democracy (ILD), the Property Registry is created to answer three key questions: who is the owner? where is the property located? and what encumbrances exist on the property? The registration process is highly decentralized and low cost. Whereas the former public system was centralized and expensive (it took an average of 48 months to complete and cost 70 minimum daily salaries), the new system runs out of 11 district offices, and uses a private staff of engineers and inspectors.

Since commencement of the new system, 30,000 titles have been recorded at an average cost of 1 percent of the previous method [Forsyth, 1990].

Limited infrastructure capacity

3.55 In fast-growing cities, infrastructure deployment persistently lags behind demand [UNCHS, 1987]. In Karachi, only 50 percent of housing units have water and sanitary connections, 70 percent have electricity and 38 percent have gas connections [Dowall, 1991c]. The lack of adequate services imposes tragic health effects on millions of households in terms of dysentery, hepatitis and cholera.

3.56 Infrastructure deficiencies also exact a heavy toll on businesses and industries. In Nigeria, lack of electrical, water, and transportation services forces enterprises to divert precious resources to fund the self-provision of infrastructure [Lee and Anas, 1989]. This self-provision is extremely inefficient since it is impossible for firms to achieve economies of large-scale production. In Lagos, up to 35 percent of the costs of new plants goes for on-site infrastructure.

3.57 The most critical constraint thwarting infrastructure investments is the chronic lack of capital to finance projects. Given the limited financial resources available to local governments in developing countries, it is of paramount importance to design and implement new methods for financing infrastructure to support urban land development. Unless cities adopt a system of taxes, user fees and charges, inadequate infrastructure provision is likely to persist. One method gaining widespread acceptance is for projects to pay for infrastructure development. Urban land policies can be implemented to increase funds for development by levying taxes, fees, or user charges.

3.58 Another intervention to improve land market efficiency and promote the financing of infrastructure systems is to tax or levy fees on vacant land owners. Many countries are or will soon start taxing vacant land owners. The argument for the tax is to make the cost of withholding "ripe" land from the market more expensive and to encourage owners to sell or develop their parcels. The track record of these taxes is mixed. Most taxes are insufficient to modify the behavior of property owners [Renard, 1991]. A more efficient mechanism is to impose special assessments on all owners of land to finance new infrastructure investments regardless of whether the land is developed. The assessment will ensure that the costs of infrastructure are recovered by passing them on to benefiting properties. It may also provide a more powerful incentive to encourage the development of vacant land.

3.59 Even when resources are available for infrastructure investment, poor coordination may constrain land development. In some cases the problem may be insufficient coordination between infrastructure agencies themselves. In other cases there may be more general weakness in the plan-making and enforcement mechanisms available at the city level which lead infrastructure agencies to dismiss the planning apparatus as too weak to act as an effective framework for their investment plans. Other reasons include conflicting objectives among line agencies and different funding sources for each of the infrastructure components.

Joint public-private real estate development

3.60 One of the clear roles for scaled-back public land development corporations is to assist developers in tackling large and complex projects. The risks of large projects can be better managed through partnerships between private land developers, construction contractors and government agencies. Teaming up creates mutual benefits for public agencies and developers. The possible benefits to the public sector include: urban redevelopment of decayed neighborhoods considered too "risky" by developers to tackle on their own; increased economic activity and taxes as under-utilized and surplus lands become developed; financial gains from ground lease income and participation in ongoing cash flow from joint development projects; private developer-provided public spaces and amenities such as theaters and cultural centers; and, developer subsidies for new public facilities.

3.61 Land readjustment is one method for structuring joint development projects where the public sector uses its land acquisition powers to assemble land. It has been very successful in Korea and Japan [Doebele, 1982]. In the Republic of Korea, 95 percent of residential land in the Seoul area has been provided through readjustment schemes. In many urban areas, the configuration of individual plots is inefficient and does not allow for the efficient provision of roads and urban services. In its simplest form it involves the pooling of land owned by the participants of a redevelopment scheme. Upon completion of the planning, replotting and deployment of urban services, the participants receive back a portion of their land. Not all of the land is returned to the participants because some of it is used for roads and infrastructure, and some of it is sold to generate funds to pay for the redevelopment of the area. Land readjustment can be voluntary or it can be compulsory.

3.62 Other variations of land readjustment have been developed including land pooling and land sharing. These approaches have been promoted to address the problems of slum clearance. In the case of land sharing the squatters negotiate an agreement to share the site with the owner. In many central city locations squatter settlements are on very valuable land. Instead of forcing the squatters off the site, the owner agrees to share it with them. The squatters move on to a portion of the site (living at higher densities) and the remainder (usually that portion located on or near a major road) is developed for commercial use. The financial costs of the redevelopment are the subject of negotiation but it is frequently the case that the owner pays the costs for relocation, planning and redevelopment.

3.63 Joint development can be an effective mechanism for governments to get the private sector to implement its urban land development goals without wasting scarce resources. The government can act as a catalyst to promote desirable development.

IV. MAKING THE NECESSARY REFORMS: SOME GUIDELINES

4.1 This section outlines a general framework for undertaking urban land policy reforms. Most of the recommendations outlined below imply major political decisions and commitments on the part of governments, especially clear support for deregulation and privatization. The scope and depth of reform can vary. For example, at a modest level land-use regulatory reforms can be initiated and targeted on master plans, subdivision controls or permitting systems. A more ambitious reform program would be to restructure public land development agencies, breaking large authorities into small operations, and privatizing or liquidating some land development operations.

4.2 Depending on the focus and extent of reforms, either major or minor modifications to enabling legislation and statutes will be required. In some instances reforms may also require fundamental changes in systems of property rights as well. Obviously, before strategies for major urban land policy reform can be developed, political and technical assessments are required. In this section, our intent is to introduce important concepts for structuring reforms; we do not attempt to provide a precise blueprint for reform.

A. The First Step to Reform: The Land Market Assessment

4.3 As the previous section of this paper described, the essential problem with most nations' urban land-use policies is too much government regulation and not enough government support of private-sector institutions. The first and obvious step is for governments to conduct an audit of their urban land policies. As described in another Urban Management Program paper, a tool known as the Land Market Assessment has been developed for this purpose [Dowall, 1991a].

The aim of the land market assessment is to provide an accurate and up-to-date data base on the operation of the urban land market. Information about the operation of the land market in terms of prices, supply of serviced land, and present and intended projects provides a concrete foundation for defining appropriate strategies for improving land market performance. LMAs can be used to support four broad activities: providing information for governmental planning and decision-making; evaluating government policies and actions; serving as a foundation for structuring land-based taxation systems; and providing information for private-sector investment and development decisions.

4.4 The most significant benefit of the LMA is that it helps to improve the quality of land development planning and policy- making by providing public officials with basic assessments of the state of the land market. In planning, as in medicine, diagnosis is the first step in problem-solving. The LMA is a method for assessing the current condition of the land market that can answer the following questions:

a. Is the supply of urban-serviced land expanding to meet growing population and employment needs?

b. Which land uses are growing the fastest?

c. Where is urban land conversion is taking place?

d. Are land prices increasing faster than the overall rate of inflation?

e. Where are land prices the highest and where are land prices increasing the fastest?

f. How much land is being provided with minimum services needed for future urban development?

g. Is there enough serviced land to accommodate urban growth for the next five years?

h. Is the price and affordability of housing and commercial and industrial space changing—are real occupancy costs greater now than before?

i. Which segments of the population do not have access to housing from the formal private sector?

4.5 Land market assessments can also be used to provide baseline estimates of future urban land requirements, help guide land-use planning policies, and infrastructure and investment decisions. For example, LMAs can be used to estimate the demand for residential plots and commercial and industrial space requirements associated with projections of population and employment. Armed with these estimates, the adequacy of the current supply of land for urban expansion can be gauged and plans developed for expanding the supply of serviced land.

4.6 Governments exert a great influence, both positive and negative, over land market outcomes, creating substantial increases in land values. In other cases, government actions are less beneficial with plans and regulations causing unintentional negative land market side-effects. The Land Market Assessment provides an information base for monitoring land markets so that the potential effects of new government policies and programs can be evaluated. The LMA can be used to answer questions such as: Are there specific public policies or actions which are constraining the land market? Is infrastructure placement limiting residential development? Are greenbelts or agricultural land preservation policies limiting development? Are planning standards and building codes pushing up housing prices?

4.7 As local governments begin to seek out new approaches for financing urban development, techniques such as special assessment districts and beneficiary charges will come into currency. In order to develop these fiscal tools, accurate information about land values and the impacts of infrastructure developments on land values will be needed. The LMA, by systematically cataloging land-value information, can play a critical role in supporting the application of these new financial tools. As a first step, the LMA can serve as foundation for gauging land-price trends. Over time, as data on land prices are tabulated, the government can gauge the impacts of public investments and use the information to set taxes, fees or user charges.

4.8 LMAs can provide a critical role in helping to inform private investment decision-making. For example, by illustrating the effective demand for low- and moderate-cost housing, LMAs can help stimulate the production of such units by the private sector. On the other hand, they can identify when the production of certain urban uses far exceeds effective demand, thus helping to bring about faster land market corrections. In the long run, with improved information about the market, the risk associated with development is reduced and developers may be able to operate with lower rates of profit [Walters, 1983].

4.9 The information provided by LMAs can also help improve the quality of loan underwriting and private investment decision-making. Overall, more informed lending decisions can lead to a more efficient use of private capital for land development.

B. The Second Step: Decentralize Land Management Authority

4.10 It will be far easier to reform urban land policies if responsibilities for them are delegated to local governments. As a first step, national-level assessments of the legal and institutional arrangements for urban land policy-making and implementation should be undertaken (see McAuslan and Farvacque, 1991 for a review of these issues). If power can be devolved to local government, the reform initiatives outlined below can be more effectively pursued and structured to better fit local land market conditions.

C. The Third Step: Deregulate

4.11 There are three critical reforms that can reduce land prices and increase land market efficiency. The first and most effective method for reducing the price effects of land-use and development controls is to bring land supply into balance with land demand. The second reform is to revise and lower standards for residential subdivisions. The third area of reform is to reduce the complexity and time requirements of land-use and development controls.

4.12 Balancing land supply and demand requires making estimates of a city's future land requirements. To do this, estimates of the demand for land for various urban uses must be made for the next five years. Based on these projections, planning policies such as zoning and floor area ratios should be evaluated and changed to align them with the demands of urban development [OECD, 1990].

4.13 Obviously, this alignment must be made in concert with broad environmental and planning objectives. Therefore, in the process of setting new land-use controls, thorough assessments of sensitive environmental areas should be made. To meet environmental objectives, prime agricultural, groundwater recharge areas, riverine areas, and sloped areas susceptible to soil erosion should be limited from development. However, densities and infrastructure systems should be adjusted to accommodate projected growth in other regions. A careful assessment of the network of land-use controls in cities and an alignment of land-policy instruments to better target important policy objectives can go a long way toward improving the efficiency and effectiveness of land policy by eliminating unnecessary or contradictory regulations.

4.14 This process of aligning land demand and supply should force planners to explicitly consider the economic as well as social and physical implications of alternative master plans and

zoning systems. Introducing market discipline into land-use policy formulation is important, especially in Eastern Europe and China where economic reforms are underway.

4.15 The second area of reform is to reduce planning and subdivision standards. As described above, most residential subdivision standards are too high. Street widths are too generous, block lengths too short and plot widths too wide. A cost analysis of these standards should be made and government should convene a panel of builders, architects, bankers, real estate brokers and neighborhood associations to draft more affordable standards. Similar assessments should be made of codes pertaining to industrial and commercial estates as well.

4.16 The final deregulation initiative is to reduce the complexity of land-use regulations. In many countries, overly complex regulations increase the costs of land development. Delays and repetitive reviews sometimes mean projects take years to get approval, adding to the costs of development. In other cases byzantine codes block new developers from competing.

4.17 Many countries, Jordan for example, have convened professional associations and planners to review their regulatory framework, to prune back unnecessary red tape. These initiatives have largely been effective and well received by developers, bankers, and planners [Erbach, 1990].

4.18 Regulatory reforms and the revisions of land development and building standards should have a major impact on informal settlements. By lowering standards, the formal sector should be able to shift some of its housing production down market. Also by introducing less costly standards, informal land developers will be able to legally produce subdivisions. In particular, if more land is opened for residential development, land supply will increase and prices will be lowered.

D. The Fourth Step: Curtail Public Land Development Agencies

4.19 In many countries, public land development agencies do little to improve land market operations or to provide land and housing for the poor. Quite often, they pose a serious financial drain to governments. It is important for governments to critically assess the performance of these organizations and take corrective actions. Such actions might include restructuring very large parastatal organizations, privatizing all or part of these corporations, or liquidating them.

4.20 If land development agencies are to be restructured, the following design guidelines should be considered:

a. Reduce the size of public land development agencies by breaking them up into units producing no more than 1,000 plots or houses per year. To foster competition, land development agencies should not have more than 20 percent of the local market for plots or houses. Set up several smaller land development agencies or autonomous branches to focus on specific geographic areas, target groups, or types of projects. Give each smaller agency autonomy to achieve goals and reward the ones that are successful.

b. Remove the agencies from the direct control of the government. Make them non-profit enterprises. Design into the firms the capacity to reward professional staff for high performance and risk-taking.

c. Simplify the mission and goals of restructured land development agencies. Avoid the temptation of burdening them with too many policy and program goals. Public land development agencies should have limited and precise objectives that are easy to understand and evaluate.

d. Be sure to staff public land development agencies with well-trained and experienced real estate development professionals. In the long term, increase the supply of land development professionals by training specialists in economics, housing finance, real estate market research, land planning, architecture, construction engineering, and management and land development techniques.

5. Revise the operating procedures of the new land development agencies, design the agencies to be flexible, do not encumber them with too many rules and regulations. Instead have the head of each agency or branch prepare a yearly development plan which outlines production goals and describes its strategy for achieving targets. Institute a review of plans and activities each year and require agency managers to alter plans to meet goals and increase efficiency [Dowall, 1989].

4.21 In some cases, such as when it is clear that the private land and housing development industry is capable of producing serviced residential plots, it may be best to privatize the land development authority by selling off its inventory of land and equipment. While such privatization is difficult, public authorities are being sold. Box 5 provides an example of Hungary's privatization of large housing construction firms.

4.22 Getting the government out of the land development business by auctioning off its land holdings will immediately open up land for urban development and stimulate a variety of private-sector initiatives. By turning the development process over to the private sector, the government can focus its efforts on infrastructure provision, improving titling and land registration systems, and planning the overall spatial structure of cities. In their place, smaller and better-targeted government agencies or non-profit housing and land development corporations can be set up to provide low-cost housing.

4.23 As discussed in an earlier section, the public sector can be quite effective in assembling multiple parcels of land for redevelopment. The Korea Land Development Corporation played a critical role in assembling land for residential development [Doebele, 1982]. Scaled-back and more focused public land development agencies might consider targeting on the act of assembling land for subdivisions which are then sold to the private sector for housing and commercial development.

Box 5: Reforming Housing Development Corporations in Hungary

While difficult, Hungary offers a clear example of what can be accomplished. The role of the large state-owned housing development enterprises in Hungary has been dramatically reduced. During 1989 and 1990, several of the very large kombinats discontinued operations. Commercial banks are suspending loans to unprofitable state-owned enterprises and remaining kombinats are becoming more responsive to market demands.

Medium-sized firms (those with between 50 and 199 employees) are starting to grow. This is in spite of the fact that firms are still having difficulties sourcing materials and securing building sites. One emerging pattern which is helping these firms, though, is the sharp increase in competitive bidding for construction projects. The share of contracts awarded by bid increased to 24 percent in 1988 from 3 percent in 1983. During 1991, Hungary plans on promoting the construction industry's productivity by privatizing firms, liberalizing rules for the importation of building materials, and by providing assistance to builders and developers.

Table 4.1 Changes in the Structure of Hungary's Construction Industry, 1980, 1986 1989

Size of Firm by Employment	Percent			Change 1980-89 (percent)
	1980	1986	1989	
Small (1-49)	4	322	1,082	2,695.0
Medium (50-199)	108	230	333	208.3
Large (200-999)	153	131	98	-35.9
Very Large (1,000 +)	70	58	48	-31.4
Total	335	741	1,561	366.0%

Source: United Nations, 1981.

E. The Fifth Step: Improve Efficiency of Land Market Operations

4.24 In market-based countries where both customary and/or informal systems of land trading occur, the government should heavily invest in or promote private initiatives to provide a common titling and registration system to support land transactions. At a minimum, cadastral, subdivision and parcel maps should be compiled, along with a system for recording real property transactions and updating ownership records [McAuslan and Farvacque, 1991]. If property tax systems are to be used, additional mapped and transaction-based records are needed on property values, tax assessments, payments and receipts [Holstein, 1991].

4.25 An important aspect of titling and registration reforms is to insure that informal areas are provided with secure title. As the Peru case illustrates, such a program can be carried out inexpensively and by the private sector [Forsyth, 1990].

F. The Sixth Step: Provide the Financial, Institutional and Spatial Structure for Installing Infrastructure Networks

4.26 Urban land policy needs to be linked with a sustainable program for infrastructure investment. Such a program requires that a basic spatial structure be prepared for each city, and that it be used to estimate the capital costs associated with providing the necessary infrastructure to support development. The financial program must be sustainable. This means that, to the fullest extent possible, the users and beneficiaries of the system should pay for it.

4.27 As is normally the case, the master plan has been used by planners to estimate the capital improvements budget for the city. However, this approach has not worked because the master plans take too long to prepare and are usually out-of-date when completed; they provide no advice about the how to implement required infrastructure systems; and they ignore infrastructure costs. Most importantly, the plans are rarely followed [Petersen, Kingsley and Telgarsky, 1990a].

4.28 Instead of using detailed master plans, many planners and infrastructure specialists now recommend the "structure plan". This plan lays out the basic networks and facilities needed to support future development. Less detailed and specific, it can be prepared quickly and at a lower cost than the master plan. Structure plans are effective if frequently updated, showing which new infrastructure projects are needed to accommodate growth.

4.29 Structure plans should form the basis for setting plans for funding infrastructure. A variety of cost recovery financial mechanisms should be considered, including user and beneficiary charges, special assessment districts, and pricing systems to recover costs and reduce congestion.

4.30 The provision of urban services should be expanded to unserviced informal areas as well. Experience shows that residents in these areas are willing to finance the costs of infrastructure service provision if the terms are affordable. This will require that governments take a more flexible posture towards infrastructure standards and costs, perhaps copying the incremental approaches to infrastructure provision widely used in informal upgrading schemes.

V. CONCLUSIONS

5.1 Developing countries need to reassess and reform their urban land policies. Many cities use master plans, zoning, subdivision regulations, building codes and other public policies to shape development. These regulations are normally adopted to help protect the urban and natural environment, gear infrastructure investments with development, and maintain and enhance the property values of neighborhoods.

5.2 In the course of adopting these and other well-intentioned regulations, little thought is given to their potential cost-effects. For example, few attempts are made to answer such questions as: How will master plan and zoning designations, if enforced, affect the supply of land for residential development? Similarly, how will minimum lot-size standards affect lot costs? Failure to address these questions is unfortunate, since there is ample evidence that land-use and development controls reduce land market efficiency and push land prices above what would prevail under competitive conditions.

5.3 These facts, raise a fundamental question: What is the necessary level of urban land-use regulation to effectively manage urban development in fast-growing third world cities? To want extent should governments engage in land development? Should policymakers rely on economic market mechanisms or use government policies and programs to determine or control how land is allocated and used? What is the optimal division of labor between the public and private sectors regarding the provision of urban services and low-cost housing?

5.4 This paper has discussed and outlined a variety of guiding principles to answer these questions. It has illustrated where government programs and policies should be reconsidered and reformed and it has suggested what new government initiatives are appropriate for improving urban land market performance.

5.5 A six-step framework for reforming urban land policy has been offered: land market assessments; decentralization of land management authority; deregulation of inappropriate and costly land-use controls; privatization of ineffective public land development agencies; implementing titling, registration and information systems to improve land market efficiency; and alternative planning and budgeting systems for financing infrastructure.

5.6 Readers interested in gaining additional information about these urban land policy reforms should consult the following Urban Management Program materials:

Bertaud, Alain, Marie-Agnes Bertaud and James O. Wright, Jr. 1988. "Efficiency in Land Use and Infrastructure Design: An Application of the Bertaud Model." INURD Discussion Paper, Report INU 17. World Bank, Urban Development Division, Washington, D. C.

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(Habitat)
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Urban Development
Division
The World Bank
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U.S.A.
Telephone: 1-202-473-1015
Facsimile: 1-202-522-3232

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Urban Management Programme
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Urban Management
ProgrammeProgramme
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7th Floor
Cairo, Egypt
Telephone: 20-2-3400052
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